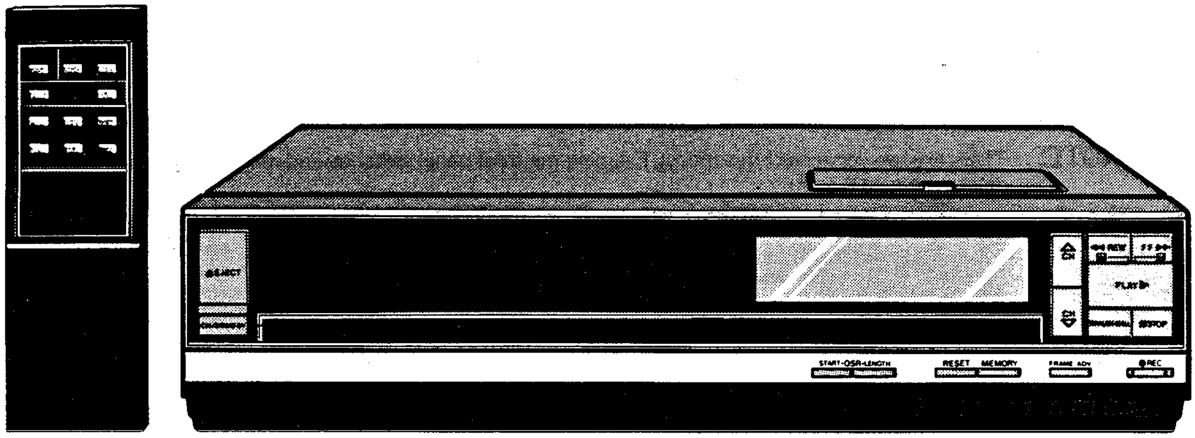
# PARTS LIST & CIRCUIT DIAGRAMS

## COLOUR VIDEO CASSETTE RECORDER

SANYO

# VHR-2300EX

VHS HQ
PAL


EJECT
REW
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RESET MEMORY
FRAME ADV
REC

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CIRCUIT DIAGRAMS

PA2P/EX
PA2P/EX-II

Reference No. WM-18677

## PRODUCT SAFETY NOTICE

The components designated by a symbol (⚠) in this schematic diagram designates components whose value are of special significance to product safety. Should any component designated by a symbol need to be replaced, use only the part designated in the Parts List. Do not deviate from the resistance, wattage and voltage ratings shown.

**NOTE** : Parts order must contain Model Number, Part Number and Description.

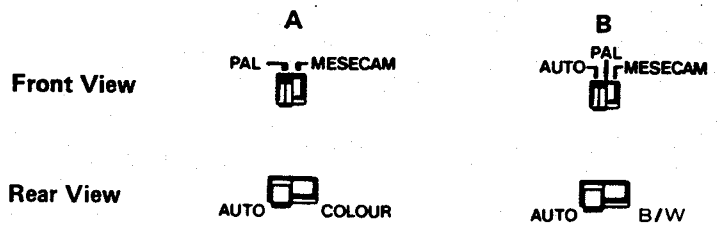
### ACCESSORIES

| Ref. No. | Part No. | Description |
|---|---|---|
| | 143-6-411T-82400 | OWNER'S MANUAL(A) |
| | 143-6-411T-85800 | OWNER'S MANUAL(B) |
| | 4-243V-38700 | ANTENNA OUTPUT CABLE |
| | 143-9-4100-64480 | REMOTE CONTROL UNIT |

### PACKING MATERIALS

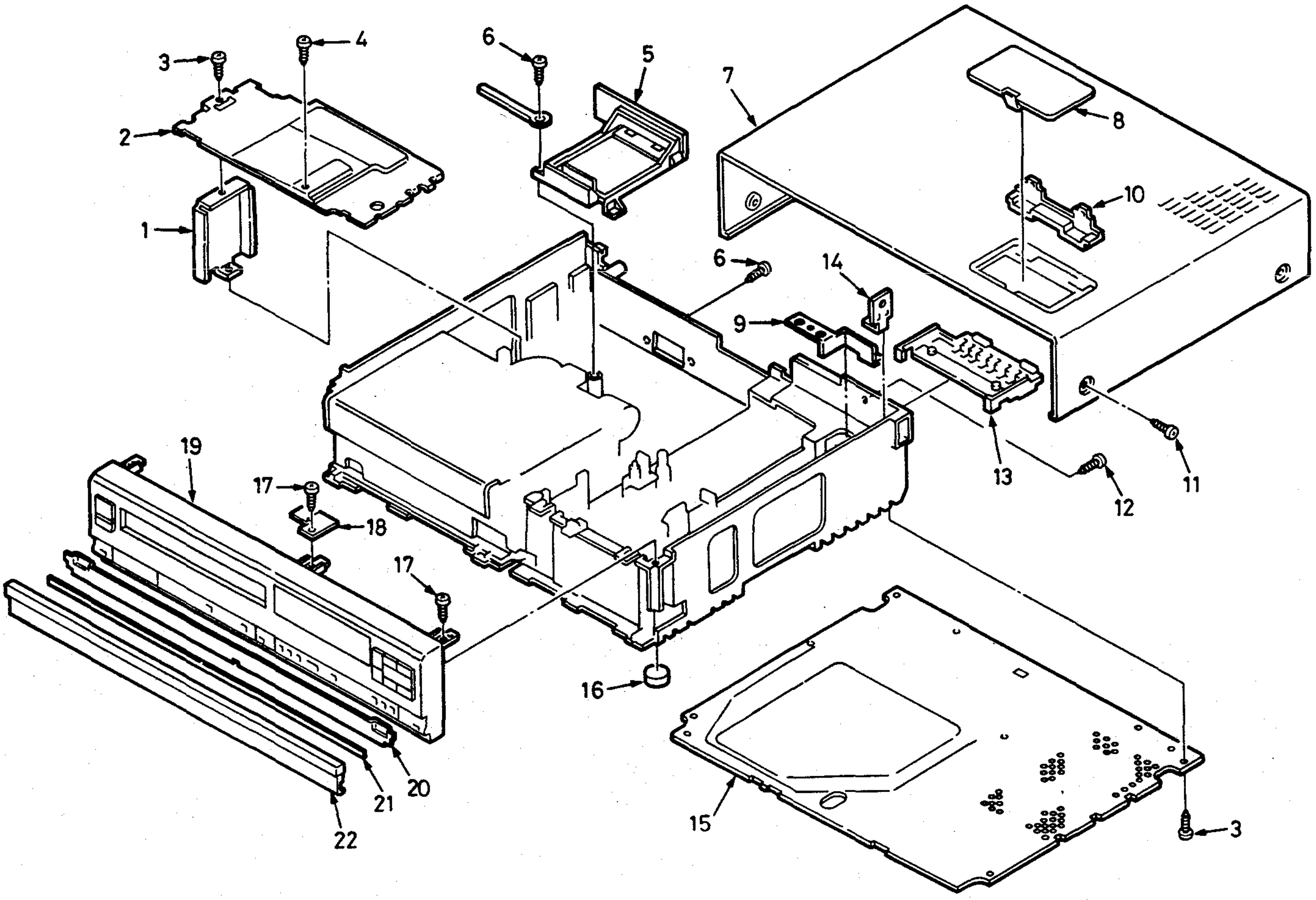
| Ref. No. | Part No. | Description |
|---|---|---|
| | 143-6-132T-63524 | INNER CARTON(A) |
| | 143-6-132T-63554 | INNER CARTON(B) |
| | 143-6-251T-04000 | INDIVIDUAL POLY.COVER |
| | 143-6-144T-17000 | PAD, FRONT |
| | 143-6-144T-17200 | PAD, REAR |

**NOTE:** There are two versions of this model. Examine the front panel switches and rear chassis switches to determine type A or B.



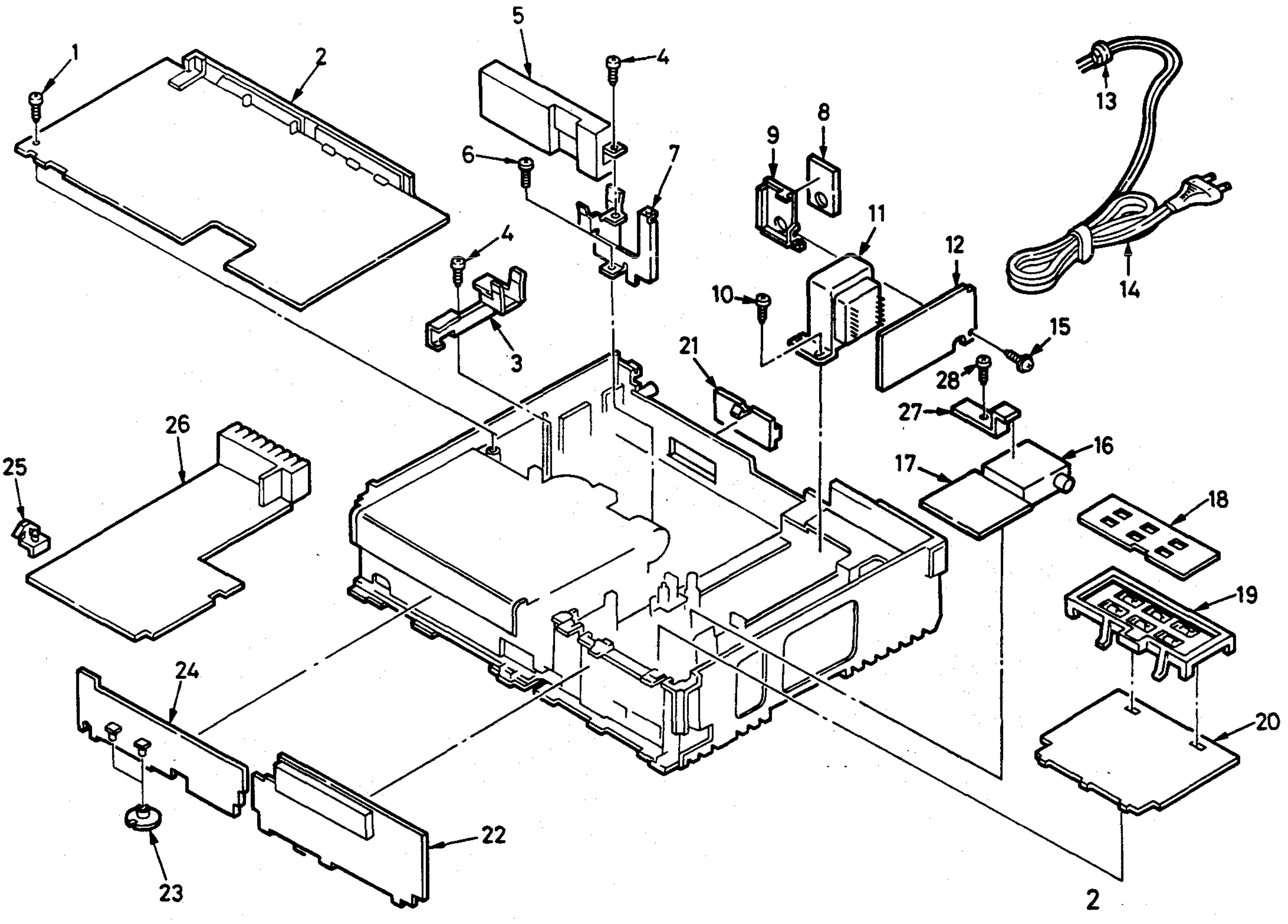
## CABINET PARTS

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143–2–310T–03600 | BRACKET, SHIELD PLATE |
| 2 | 143–2–322T–70700 | UPPER SHIELD PLATE |
| 3 | BJB2S++3+8+Z1 | S T BIND H 3X8Z1 |
| 4 | BJBYS++3+4+Z1 | S M BIND H 3X4Z1 |
| 5 | 143–0–233V–09800 | TM3 BOARD ASSEMBLY |
| 6 | BJB2S++310+ZK | S T BIND H 3X10ZK |
| 7 | 143–2–111T–08906 | CABINET |
| 8 | 143–2–133T–16807 | TUNING CONTROL COMPARTMENT COVER |
| 9 | 143–2–310T–05200 | BRACKET, CHASSIS |
| 10 | 143–2–210T–04701 | BRACKET, COVER |
| 11 | 143–2–421T–10401 | SCREW, M4X10 |
| 12 | BJB2S++3+8+ZK | S T BIND H 3X8ZK |
| 13 | 143–2–133T–19400 | COVER, HEAT SINK |
| 14 | 143–2–351T–70002 | BRACKET, CHASSIS |
| 15 | 143–2–125T–07701 | BOTTOM PLATE |
| 16 | 143–2–174T–02402 | STAND |
| 17 | BJB2S++312+Z1 | S T BIND H 3X12Z1 |
| 18 | 143–2–310T–07000 | BRACKET, FRONT PANEL |
| 19 | 143–0–122T–24510 | FRONT PANEL(A) |
| or | 143–0–122T–24514 | FRONT PANEL(B) |
| 20 | 143–2–245T–00100 | BACK PLATE, COVER |
| 21 | 141–2–250T–00700 | DOUBLE FACE, COVER |
| 22 | 143–2–133T–22501 | CLOCK/TIMER CONTROL COMPARTMENT COVER |



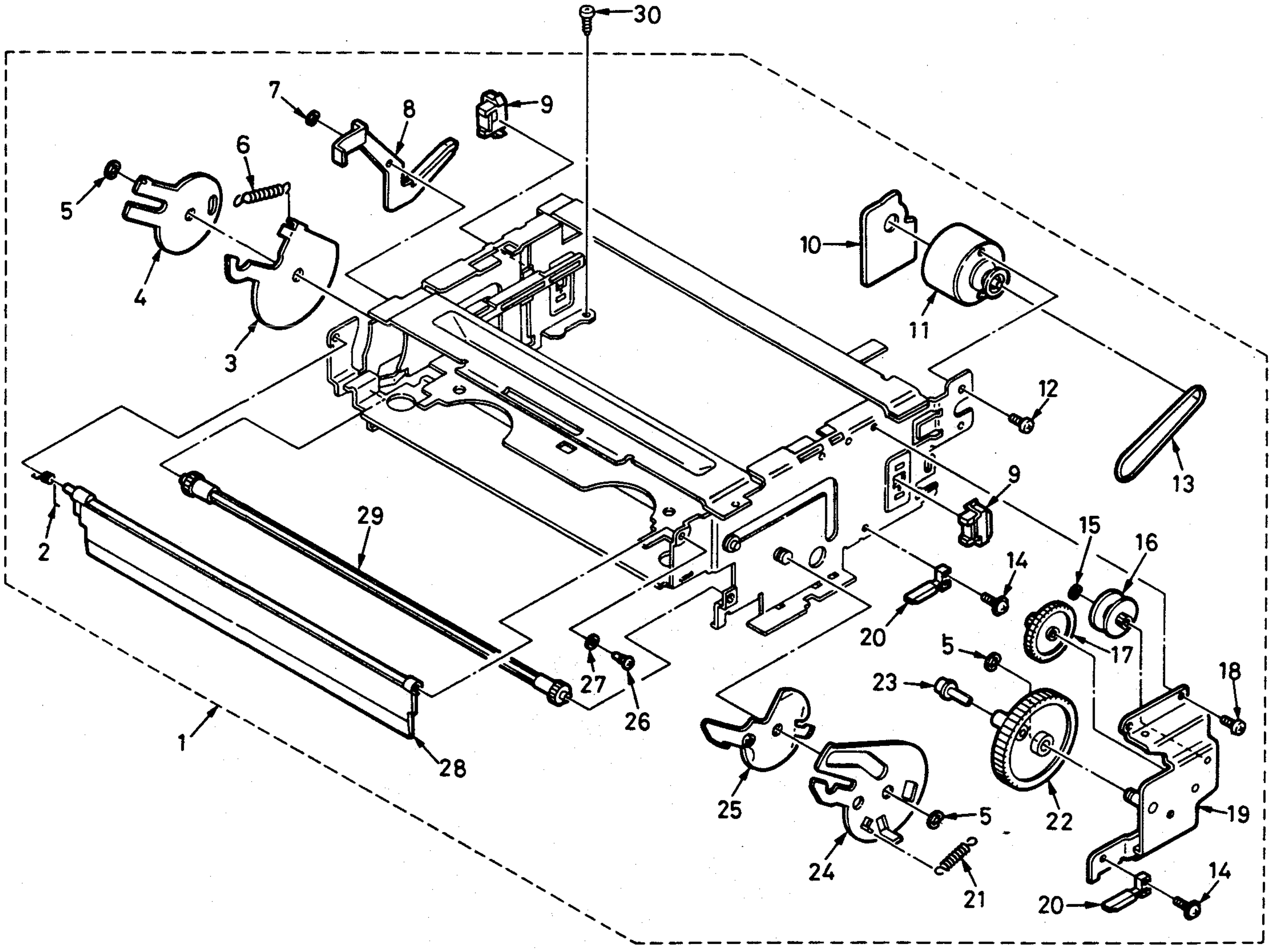
## CHASSIS PARTS

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | BJB2S++312+ZR | S T BIND H 3X12ZR |
| 2 | 143-0-233V-08301 | VD1 BOARD ASSEMBLY(A) |
| or | 143-0-233V-08342 | VD-1 BOARD ASSEMBLY(B) |
| 3 | 143-2-351T-73600 | BRACKET, VP-1 PCB. |
| 4 | BJB2S++3+8+Z1 | S T BIND H 3X8Z1 |
| 5 | 143-0-233V-12400 | VP1 BOARD ASSEMBLY |
| 6 | BJBYS++3+4+Z1 | S M BIND H 3X4Z1 |
| 7 | 143-2-351T-75400 | BRACKET, VP-1 PCB. |
| 8 | 143-2-143T-58700 | PLATE, POWER CORD |
| 9 | 143-2-310T-04400 | BRACKET, POWER CORD |
| 10 | BJB2S++412+Z1 | S T BIND H 4X12Z1 |
| 11 | ⚠ 4-251V-61100 | POWER TRANSFORMER |
| 12 | 143-0-233V-20971 | PW1 BOARD ASSEMBLY |
| 13 | 143-2-464T-02700 | FIXER, POWER CORD |
| 14 | ⚠ 143-0-236V-67530 | POWER CORD |
| 15 | BJX6S++3+8+Z1 | S T WASHER H 3X8Z1 |
| 16 | 4-115V-21000 | TUNER |
| 17 | 143-0-233V-08000 | TN1 BOARD ASSEMBLY(B) |
| or | 143-0-233V-08023 | TN1 BOARD ASSEMBLY(A) |
| 18 | 143-2-143T-67301 | PLATE, TUNING CONTROL |
| 19 | 143-2-210T-07900 | BRACKET, TUNING CONTROL |
| 20 | 143-0-233V-17421 | TN2 BOARD ASSEMBLY |
| 21 | 143-2-133T-21900 | VPS COMPARTMENT COVER |
| 22 | 143-0-233V-17521 | TN3 BOARD ASSEMBLY |
| 23 | 143-2-163T-06200 | KNOBS, TRACKING & PICTURE |
| 24 | 143-0-233V-17601 | SY2 BOARD ASSEMBLY(A) |
| or | 143-0-233V-17626 | SY-2 BOARD ASSEMBLY(B) |
| 25 | 143-2-251T-01400 | HINGE, SY-1 PCB. |
| 26 | 143-0-233V-05904 | SY1 BOARD ASSEMBLY |
| 27 | 143-2-310T-04620 | BRACKET, TUNER(B) |
| 28 | BJB2S++310+Z1 | S T BIND H 3X10Z1(B) |



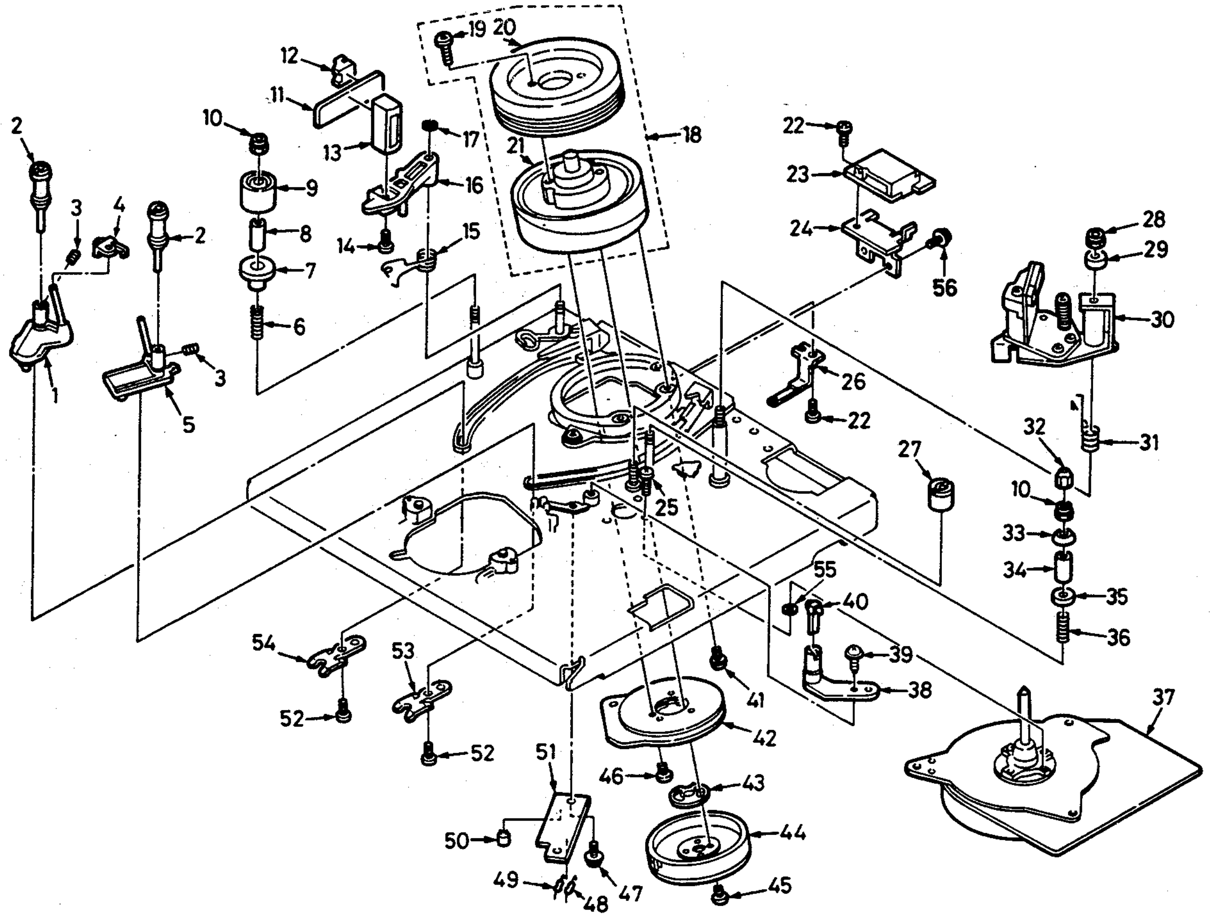
## MECHANISM PARTS(1)

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143-9-351T-75327 | HOLDER ASSEMBLY, CASSETTE |
| 2 | 143-2-851T-81900 | SPRING, DOOR |
| 3 | 143-9-741T-59600 | LEVER, GEAR, LEFT |
| 4 | 143-2-741T-59400 | LEVER, SWING, LEFT |
| 5 | TJETU+++4++++ | E-RING, M4 |
| 6 | 143-2-851T-82600 | SPRING, LEVER, LEFT |
| 7 | TJETU+2R5++++ | E-RING, M2.5 |
| 8 | 143-2-741T-59300 | LEVER, OPENER |
| 9 | 143-0-230V-84950 | MC-31 BOARD ASSEMBLY |
| 10 | 143-0-230V-84651 | MC-32 BOARD ASSEMBLY |
| 11 | 143-0-527V-02600 | MOTOR, FRONT LOADING |
| 12 | BJNBS2R6+3+Z1 | S M PAN H 2.6X3Z1 |
| 13 | 143-2-560T-00900 | BELT, FRONT LOADING MOTOR |
| 14 | BJY1S++2+9+Z1 | S M PAN W/SPR W, WASH 2X9Z1 |
| 15 | TJETU+1R5++++ | E-RING, M1.5 |
| 16 | 143-2-661T-69800 | PULLEY, PINION |
| 17 | 143-2-581T-10900 | GEAR, REDUCTION |
| 18 | BJSTS++3+6+Z1 | S M PAN H 3X6Z1 |
| 19 | 143-0-351T-71600 | BRACKET, FRONT LOADING MOTOR |
| 20 | 4-231V-83500 | SWITCH, START/END |
| 21 | 143-2-851T-82700 | SPRING, LEVER, RIGHT |
| 22 | 143-2-581T-12800 | GEAR, SWING |
| 23 | 143-2-662T-15300 | ROLLER, SWING |
| 24 | 143-2-741T-59700 | LEVER, GEAR, RIGHT |
| 25 | 143-2-741T-59500 | LEVER, SWING, RIGHT |
| 26 | 143-2-421T-11000 | SCREW, CASSETTE DOOR |
| 27 | WJKWS++3R0DZ1 | WASHER, M3X6X0.63 |
| 28 | 143-2-133T-23600 | DOOR, CASSETTE |
| 29 | 143-9-751T-88800 | SHAFT, FRONT LOADING |
| 30 | 143-2-421T-11800 | SCREW, M3X6 |



## MECHANISM PARTS(2)

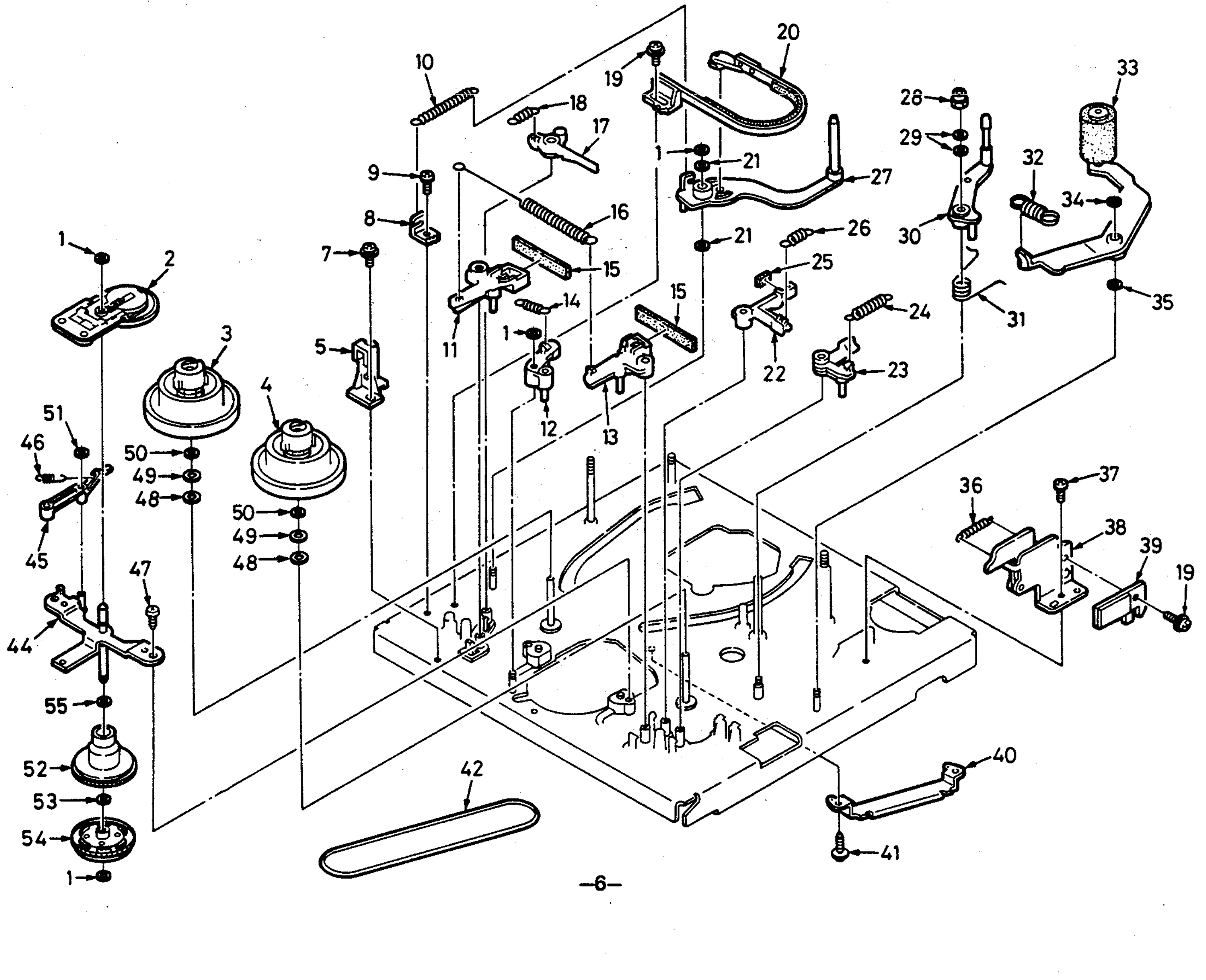
| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143−0−822T−02901 | GUIDE, LEADING, LEFT |
| 2 | 143−0−821T−13201 | GUIDE, TAPE |
| 3 | BJAMS++2+3MCP | S M H LESS HEX SOCKET 2X3CP |
| 4 | 143−2−351T−73900 | BRACKET, LEFT LEADING GUIDE |
| 5 | 143−0−822T−02801 | GUIDE, LEADING, RIGHT |
| 6 | 143−2−851T−85500 | SPRING, IMPEDANCE ROLLER |
| 7 | 143−2−457T−13400 | WASHER, IMPEDANCE ROLLER |
| 8 | 143−2−681T−17500 | SLEEVE, IMPEDANCE ROLLER |
| 9 | 143−2−662T−15400 | ROLLER, IMPEDANCE |
| 10 | 143−2−421T−12600 | NUT, M3 |
| 11 | 4−230V−99200 | BOARD, MC-23 |
| 12 | 4−235V−46502 | SOCKET, 2PIN, HORIZONTAL, WHITE |
| 13 | 4−242V−24700 | HEAD, ERASE |
| 14 | BJNBS++2+4+Z1 | S M PAN H 2X4Z1 |
| 15 | 143−2−851T−79400 | SPRING, ERASE HEAD LEVER |
| 16 | 143−2−741T−57501 | LEVER, ERASE HEAD |
| 17 | TJETU+++3++++ | E-RING, M3 |
| 18 | 143−0−771T−09400 | DRUM ASSEMBLY (A) |
| or | 143−0−771T−05900 | DRUM ASSEMBLY (B) |
| 19 | BJX1S++3+8+Z1 | S M PAN W/FLANGE WAS 3X8Z1 |
| 20 | 143−0−771T−09500 | DRUM, UPPER (A) |
| or | 143−0−771T−05121 | DRUM, UPPER (B) |
| 21 | 143−0−771T−09600 | DRUM, LOWER (A) |
| or | 143−0−771T−04500 | DRUM, LOWER (B) |
| 22 | BJX2S++3+4+Z1 | S M PAN W/SPRING WAS 3X4Z1 |
| 23 | 143−0−233V−05500 | MC-30 BOARD ASSEMBLY (B) |
| or | 143−0−233V−20250 | MC-30 BOARD ASSEMBLY (A) |
| 24 | 143−2−377T−20800 | BRACKET, MC-30 BOARD (B) |
| or | 143−2−377T−21400 | BRACKET, MC-30 BOARD (A) |
| 25 | BJX2S++3+6+Z1 | S M PAN W/SPRING WAS 3X6Z1 |
| 26 | 143−0−324T−00922 | PLATE, GROUNDING (B) |
| or | 143−0−324T−00924 | PLATE, GROUNDING (A) |
| 27 | 143−2−421T−10200 | NUT, M4 |
| 28 | 143−2−421T−12400 | NUT, M5 |
| 29 | 143−2−352T−22100 | SPACER |
| or | 143−2−352T−22800 | SPACER |
| 30 | 143−9−242V−24622 | HEAD ASSEMBLY, AUDIO/CONTROL |
| 31 | 143−2−851T−85100 | SPRING, AUDIO/CONTROL HEAD |
| 32 | 143−2−421T−13100 | NUT |
| 33 | 143−2−457T−15500 | WASHER, M3X7.8X0.8 |
| 34 | 143−2−821T−13100 | GUIDE, TAPE |
| 35 | 143−2−457T−07800 | WASHER, M3X8X2.3 |
| 36 | 143−2−851T−86100 | SPRING, TAPE GUIDE |
| 37 | 4−527V−54102 | MOTOR, CAPSTAN |
| 38 | 143−0−210T−04400 | BRACKET, TAPE END SENSOR |
| 39 | BJXWS2R6+8+Z1 | S T WASHER H 2.6X8Z1 |
| 40 | SLLN59+++++NO | TAPE END SENSOR, LN59 |
| 41 | BJX2S++3+5+Z1 | S M PAN W/SPRING WAS 3X5Z1 |
| 42 | 4−264V−17100 | STATOR, DRUM (B) |
| 42 | 4−264V−17300 | STATOR, DRUM (B) |
| or | 4−264V−17500 | STATOR, DRUM (A) |
| 43 | 143−2−352T−22400 | SPACER, ROTOR (B) |
| 44 | 143−2−774T−02801 | ROTOR, DRUM (B) |
| 44 | 143−2−774T−02900 | ROTOR, DRUM (B) |
| or | 143−2−774T−03000 | ROTOR, DRUM (A) |
| 46 | BJX2S2R310+Z1 | S M PAN W/SPRING WAS 2.3X10Z1 |
| 47 | BJXWS2R6+6+Z1 | S T WASHER H 2.6X6Z1 |
| 48 | 401 026 0647 | CARBON 270 JA 1/6W |
| 49 | 401 024 6740 | CARBON 100 JA 1/6W |
| 50 | 4−202V−15200 | SENSOR, REEL |
| 51 | 4−233V−07600 | BOARD, REEL SENSOR |
| 52 | BJBYS++2+4+Z1 | S M BIND H 2X4Z1 |
| 53 | 143−2−822T−02700 | BRACKET, RIGHT LEADING GUIDE |
| 54 | 143−2−822T−02600 | BRACKET, LEFT LEADING GUIDE |
| 55 | 143−2−457T−15001 | WASHER, M3.4X8X0.2 |
| 56 | BJX2S2R6+6+Z1 | S M PAN W/SPRING WAS 2.6X6Z1 |



## MECHANISM PARTS(3)

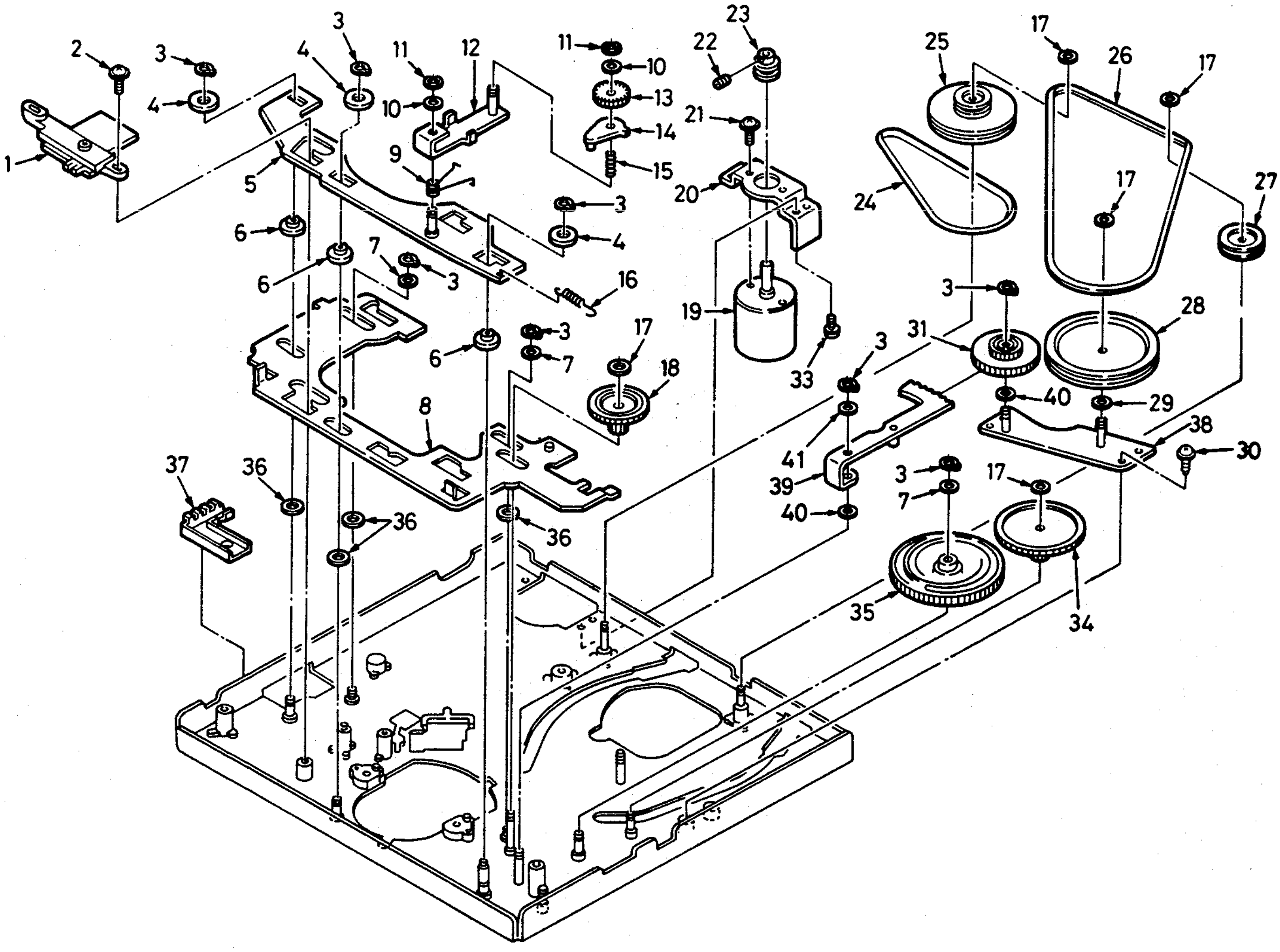
| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143-2-457T-12200 | WASHER, M2.4X6X0.4 |
| 2 | 143-0-662T-15620 | ROLLER, REEL DRIVE |
| 3 | 143-0-531T-05100 | REEL PLATE, SUPPLY |
| 4 | 143-0-531T-05121 | REEL PLATE, TAKE-UP |
| 5 | 4-231V-86301 | SWITCH, ERASE PREVENTION |
| 7 | BJY1S2R6+6+Z1 | S M PAN W/SPR W, WASH 2.6X6Z1 |
| 8 | 143-2-858T-03600 | BRACKET, BACK TENSION SPRING |
| 9 | BJX2S++3+5+Z1 | S M PAN W/SPRING WAS 3X5Z1 |
| or | BJX2S++3+8+Z1 | S M PAN W/SPRING WAS 3X8Z1 |
| 10 | 143-2-851T-85900 | SPRING, BACK TENSION |
| 11 | 143-0-741T-57000 | LEVER, SUPPLY REEL BRAKE |
| 12 | 143-0-741T-57900 | LEVER, IDLER STOPPER |
| 13 | 143-0-741T-56900 | LEVER, TAKE-UP REEL BRAKE |
| 14 | 143-2-851T-84600 | SPRING, IDLER STOPPER |
| 15 | 143-2-712T-04300 | BRAKE SHOE |
| 16 | 143-2-851T-79700 | SPRING, REEL BRAKE |
| 17 | 143-0-741T-57300 | LEVER, SUPPLY SOFT BRAKE |
| 18 | 143-2-851T-84900 | SPRING, SUPPLY SOFT BRAKE |
| 19 | BJY1S++3+6+Z1 | S M PAN W/SPR W, WASH 3X6Z1 |
| 20 | 143-0-711T-02021 | BAND, BRAKE |
| 21 | 141-2-453T-30302 | WASHER, M3X5.4X0.5 |
| 22 | 143-2-741T-57100 | LEVER, TAKE-UP SOFT BRAKE |
| 23 | 143-0-741T-57200 | LEVER, REWIND SOFT BRAKE |
| 24 | 143-2-851T-79200 | SPRING, TAKE-UP SOFT BRAKE |
| 25 | 143-2-712T-04400 | BRAKE SHOE |
| 26 | 143-2-851T-79100 | SPRING, TAKE-UP SOFT BRAKE |
| 27 | 143-0-741T-61100 | LEVER, BACK TENSION |
| 28 | 143-2-421T-12600 | NUT, M3 |
| 29 | 143-2-453T-00401 | WASHER, M3.1X6X0.25 |
| 30 | 143-0-741T-56800 | LEVER, REWIND GUIDE |
| 31 | 143-2-851T-78100 | SPRING, REWIND GUIDE LEVER |
| 32 | 143-2-851T-80100 | SPRING, PINCH ROLLER |

| Ref. No. | Part No. | Description |
|---|---|---|
| 33 | 143-0-545T-02720 | ROLLER, PINCH |
| 34 | TJETU+++3++++ | E-RING, M3 |
| 35 | 141-2-453T-30502 | WASHER, M4.1X6.5X0.5 |
| 36 | 143-2-851T-80200 | SPRING, CASSETTE OPENER |
| 37 | BJX2S2R6+4+Z1 | S M PAN W/SPRING WAS 2.6X4Z1 |
| 38 | 143-0-741T-58300 | LEVER, CASSETTE OPENER |
| 39 | 4-221V-18100 | SENSOR, DEW |
| 40 | 143-2-351T-75000 | BRACKET, CAPSTAN MOTOR |
| 41 | BJXWS++310+Z1 | S T WASHER H 3X10Z1 |
| 42 | 143-2-560T-01000 | BELT, REEL DRIVE |
| 44 | 143-0-351T-73110 | BRACKET, ROLLER |
| 45 | 143-2-741T-61000 | LEVER, SUPPLY SOFT BRAKE |
| 46 | 143-2-851T-83800 | SPRING,<br>SUPPLY SOFT BRAKE LEVER |
| 47 | BJB2S2R6+8+Z1 | S T BIND H 2.6X8Z1 |
| 48 | 143-2-453T-00400 | WASHER, M3.1X6X0.5 |
| 49 | 143-2-352T-21100 | SPACER, REEL PLATES |
| 50 | 143-2-453T-00400 | WASHER, M3.1X6X0.5 |
| or | 143-2-453T-00401 | WASHER, M3.1X6X0.25 |
| or | 143-2-453T-00402 | WASHER, M3.1X6X0.13 |
| or | 143-2-453T-00403 | WASHER, M3.1X6X0.2 |
| or | 143-2-453T-00404 | WASHER, M3.1X6X0.4 |
| 51 | 143-2-457T-12000 | WASHER |
| 52 | 143-0-581T-13423 | GEAR, SLIP, UPPER |
| 53 | 143-2-457T-16100 | WASHER |
| 54 | 143-0-581T-13200 | GEAR, SLIP, LOWER |
| or | 143-2-581T-13201 | GEAR, SLIP, LOWER |
| 55 | 143-2-457T-16400 | WASHER, M3.1X5.4X0.4 |



## MECHANISM PARTS(4)

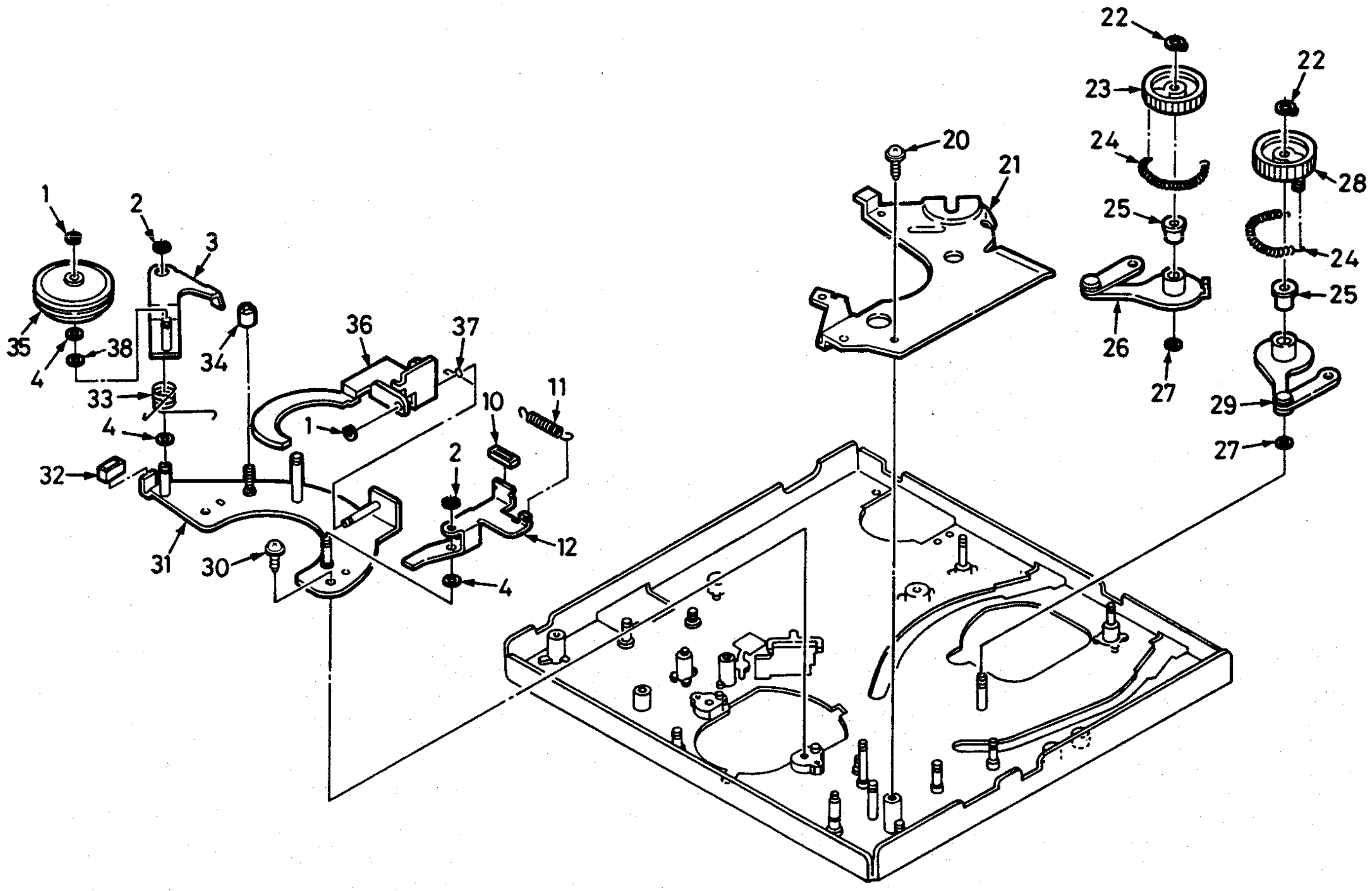
| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 4-231V-86500 | SWITCH, MODE SELECT |
| 2 | 143-2-421T-12700 | SCREW, M2.6X12 |
| 3 | TJGTS+++3++CP | G-RING, M3 |
| 4 | 143-2-457T-12600 | WASHER, M4.2X12X0.5 |
| 5 | 143-0-731T-15300 | SLIDE, UPPER |
| 6 | 143-2-681T-17400 | SLEEVE, SLIDE |
| 7 | 143-2-457T-13600 | WASHER, M4.2X7.8X0.25 |
| 8 | 143-0-731T-15200 | SLIDE, LOWER |
| 9 | 143-2-851T-83200 | SPRING, INSTANT BRAKE LEVER |
| 10 | 143-2-457T-13500 | WASHER, M3.2X7X0.25 |
| 11 | EJETU+2R3++++ | E-RING, M2.3 |
| 12 | 143-0-741T-57700 | LEVER, INSTANT BRAKE |
| 13 | 143-0-581T-11800 | GEAR, SLIP |
| 14 | 143-2-741T-57800 | LEVER, SLIP GEAR |
| 15 | 143-2-851T-78300 | SPRING, SLIP GEAR |
| 16 | 143-2-851T-78400 | SPRING, SLIDE RETURN |
| 17 | 143-2-457T-12200 | WASHER, M2.4X6X0.4 |
| 18 | 143-2-581T-11900 | GEAR, CENTER, INSTANT BRAKE |
| 19 | 4-527V-02700 | MOTOR, LOADING |
| or | 143-0-52[illegible]-02800 | MOTOR, LOADING |
| 20 | 143-2-[illegible]-02800 | BRACKET, LOADING MOTOR |
| 21 | BJY3S2[illegible]2R8Z1 | S M WASHER H 2.6X2.8Z1 |
| 22 | BJAMS2R6+2DCP | S M H LESS HEX SOCKET 2.6X2.6CP |
| 23 | 143-2-661T-72000 | PULLEY, LOADING MOTOR |
| 24 | 143-2-564T-04200 | BELT, SMALL |
| 25 | 143-2-661T-71800 | PULLEY, TWO STEPS |
| 26 | 143-2-564T-04300 | BELT, LARGE |
| 27 | 143-2-661T-71700 | PULLEY, SMALL |
| 28 | 143-2-661T-71900 | PULLEY, LARGE |
| 29 | 141-2-453T-30301 | WASHER, M3X5.4X0.25 |
| 30 | BJXWS2R6+8+Z1 | S T WASHER H 2.6X8Z1 |
| 31 | 143-2-581T-11600 | GEAR, TWO STEPS |
| 33 | BJY3S2R6+8+Z1 | S M WASHER H 2.6X8Z1 |
| 34 | 143-2-581T-11500 | GEAR, TWO STEPS |
| 35 | 143-2-671T-02500 | CAM, DRIVE |
| 36 | 141-2-453T-30501 | WASHER, M4.1X6.5X0.25 |
| 37 | 143-2-351T-75100 | BRACKET, MODE SELECT SWITCH |
| 38 | 143-0-351T-68621 | BRACKET, PULLEY SUPPORT |
| 39 | 143-0-581T-11701 | GEAR, LEVER |
| 40 | 141-2-453T-31701 | WASHER, M4X8X0.5 |
| 41 | 143-2-453T-00403 | WASHER, M3.1X6X0.2 |



## MECHANISM PARTS (5)

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143-2-457T-12200 | WASHER, M2.4X6X0.4 |
| 2 | TJETU+2R3++++ | E-RING, M2.3 |
| 3 | 143-0-741T-60700 | LEVER, REWIND GEAR |
| 4 | 141-2-453T-30302 | WASHER, M3X5.4X0.5 |
| 10 | 143-2-445T-16000 | CUSHION, LEVER |
| 11 | 143-2-851T-83600 | SPRING, LEVER PRESSURE |
| 12 | 143-2-741T-60900 | LEVER, FF SELECT, RIGHT |
| 20 | BJXWS2R6+8+Z1 | S T WASHER H 2.6X8Z1 |
| 21 | 143-0-465T-12401 | STOPPER, INSTANT BRAKE LEVER |
| 22 | TJGTS+++3++CP | G-RING, M3 |
| 23 | 143-0-581T-11300 | GEAR, PRESSURE LEVER, RIGHT |
| 24 | 143-2-851T-78200 | SPRING, PRESSURE LEVER |
| 25 | 143-2-681T-16800 | SLEEVE, PRESSURE LEVER |
| 26 | 143-0-741T-58101 | LEVER, PRESSURE, RIGHT |
| 27 | 143-2-457T-13600 | WASHER, M4.2X7.8X0.25 |
| 28 | 143-0-581T-11400 | GEAR, PRESSURE LEVER, LEFT |

| Ref. No. | Part No. | Description |
|---|---|---|
| 29 | 143-0-741T-58001 | LEVER, PRESSURE, LEFT |
| 30 | BJXWS++3+8+Z1 | S T WASHER H 3X8Z1 |
| or | BJXWS++310+Z1 | S T WASHER H 3X10Z1 |
| 31 | 143-0-351T-73021 | BRACKET, GEAR |
| 32 | 143-2-445T-15900 | CUSHION, BRACKET |
| 33 | 143-2-851T-83700 | SPRING, REWIND GEAR PRESSURE |
| 34 | 143-2-421T-11600 | NUT, M3 |
| 35 | 143-0-581T-13321 | GEAR, REWIND |
| 36 | 143-0-747T-06300 | BRACKET, GEAR LOCK |
| 37 | 143-2-851T-86700 | SPRING |
| 38 | 141-2-453T-30300 | WASHER, M3X5.4X0.13 |



## ELECTRICAL PARTS

**NOTE:**

* Materials of Capacitors are abbreviated as follows;

| | |
|---|---|
| ALUMINUM | Aluminum Electrolytic Capacitor |
| BC CON | Barrier Layer Ceramic Capacitor |
| CERAMIC | Ceramic Capacitor |
| EDL | Electric Double Layer Capacitor |
| ELECT | Electrolytic Capacitor |
| MYLAR | Mylar Film Capacitor |
| NON POLARIZED | Non Polarized Electrolytic Capacitor |
| POLYPRO | Polypropylene Capacitor |

* Tolerance of Capacitor, Resistors and Other parts are noted with follow symboles;

| | |
|---|---|
| A | +75-10% |
| F | ±1% |
| G | ±2% |
| J | ±5% |
| K | ±10% |
| M | ±20% |
| N | ±30% |
| P | +100-0% |
| Z | +80-20% |

### VD-1 BOARD (VIDEO)
### NO.143-0-233V-08301(A)/143-0-233V-08342(B)

| Location | Part No. | Description |
|---|---|---|
| | 143–2–143T–64270 | PLATE, JACKS & SWITCHES(B) |
| | 143–2–143T–64271 | PLATE, JACKS & SWITCHES(A) |
| | 143–9–4300–74200 | RF CONVERTER |
| | 143–9–4300–77200 | RF CONVERTER(B) |
| | 143–0–233V–21100 | VD5 BOARD ASSEMBLY(B) |
| | 143–0–233V–21122 | VD-5 BOARD ASSEMBLY(A) |
| | 143–2–210T–08500 | BRACKET, VD-5 BOARD. |
| | 143–0–208V–02600 | HIC BOARD ASSEMBLY |
| | 143–0–233V–08400 | VD-2 BOARD ASSEMBLY(A) |
| | | **(COMPOSITE)** |
| B1001 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B1002 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B1080 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B1251 | SRC3399++++++ | TR MD 2SC3399(A) |
| or | SRRN1204+++++ | TR MD RN1204(A) |
| B1301 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B1302 | SRA1345++++++ | TR MD 2SA1345 |
| or | SRRN2204+++++ | TR MD RN2204 |
| B1303 | SRA1348+++++T | TR MD 2SA1348 |
| or | SRRN2202++++T | TR MD RN2202 |
| B1304 | SRA1345+++++T | TR MD 2SA1345 |
| or | SRRN2204++++T | TR MD RN2204 |
| | | **(CAPACITORS)** |
| C1001 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1002 | CE+16107MRAKL | ELECT 100MF 16V M R AK |
| C1003 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1004 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1005 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1006 | CC+505R6KASLG | CERAMIC 5.6PF 50V K A SL |
| C1007 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1008 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1009 | CC+50181JAYBG | CERAMIC 180PF 50V J A YB |
| C1010 | CC+50820JAYBG | CERAMIC 82PF 50V J A YB G |
| C1011 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1012 | CC+50151JRSLL | CERAMIC 150PF 50V J R SL |
| C1013 | CE6R3476MRAKL | ELECT 47MF 6.3V M R AK |
| C1014 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1015 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1016 | CC+50390JASLG | CERAMIC 39PF 50V J A SL G |
| C1017 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1018 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1019 | CC+50120JASLG | CERAMIC 12PF 50V J A SL G |
| C1020 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1021 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1022 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1023 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1024 | CB+25223MRXRL | BC CON 0.022MF 25V M R XR |
| C1025 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C1026 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C1027 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1028 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1029 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C1030 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C1031 | CC+50561KAYBG | CERAMIC 560PF 50V K A YB |
| C1032 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1033 | CC+50151KAYBG | CERAMIC 150PF 50V K A YB |
| C1034 | CC+50221JRSLL | CERAMIC 220PF 50V J R SL |
| C1035 | CC+50680JASLG | CERAMIC 68PF 50V J A SL G |
| C1036 | CC+50471JRSLL | CERAMIC 470PF 50V J R SL |
| C1037 | CC+50471JRSLL | CERAMIC 470PF 50V J R SL |
| C1038 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1039 | CE+16106MRAKL | ELECT 10MF 16V M R AK |
| C1040 | CC+50471JRSLL | CERAMIC 470PF 50V J R SL |
| C1041 | CC+50471JAYBG | CERAMIC 470PF 50V J A YB |
| C1042 | CC+50271JAYBG | CERAMIC 270PF 50V J A YB |
| C1043 | CE+50104MRAKL | ELECT 0.1MF 50V M R AK |
| C1044 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1045 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1046 | CC+50820JAYBG | CERAMIC 82PF 50V J A YB G |
| C1047 | CC+50391JRSLL | CERAMIC 390PF 50V J R SL |
| C1049 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1050 | CC+50390JRCHL | CERAMIC 39PF 50V J R CH |
| C1051 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1052 | CE+50105MRAKL | ELECT 1MF 50V M R AK |
| C1053 | CC+50680JASLG | CERAMIC 68PF 50V J A SL G |
| C1054 | CC+50331KAYBG | CERAMIC 330PF 50V K A YB |
| C1055 | CE+25335MRAKL | ELECT 3.3MF 25V M R AK |
| C1056 | CE+50225MRAKL | ELECT 2.2MF 50V M R AK |
| C1057 | CE+25475MRAKL | ELECT 4.7MF 25V M R AK |
| C1058 | CE+50225MRHAL | ELECT 2.2MF 50V M R HA |
| C1059 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1060 | CC+50471KAYBG | CERAMIC 470PF 50V K A YB |
| C1083 | CC+50330JASLG | CERAMIC 33PF 50V J A SL G |
| C1084 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1101 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1106 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C1107 | CC+50102JAYBG | CERAMIC 0.001MF 50V J AYB |
| C1108 | CC+505R6DACHG | CERAMIC 5.6PF 50V D A CH |
| C1110 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1111 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1112 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C1113 | CE+50225MRHAL | ELECT 2.2MF 50V M R HA |
| C1114 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C1115 | CC+50820JAYBG | CERAMIC 82PF 50V J A YB G(A) |
| or | CC+50270JASLG | CERAMIC 27PF 50V J A SL G(B) |
| C1116 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1117 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |

| Location | Part No. | Description |
|---|---|---|
| C1119 | CB+25223MRXRL | BC CON 0.022MF 25V M R XR |
| C1120 | CE+10226MRHAL | ELECT 22MF 10V M R HA |
| C1122 | CC+50471JAYBG | CERAMIC 470PF 50V J A YB(B) |
| C1124 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1125 | CE+50104MRHAL | ELECT 0.1MF 50V M R HA |
| C1126 | CM+50223KG++S | MYLAR 0.022MF 50V K G |
| C1127 | CB+16104KRXRL | BC CON 0.1MF 16V K(B) |
| or | CB+16104MRXRL | BC CON 0.1MF 16V M R XR(A) |
| C1301 | CE6R3477MRHAL | ELECT 470MF 6.3V M R HA |
| C1302 | CE+16476MVHAS | ELECT 47MF 16V M V HA |
| C1303 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1304 | CE6R3477MRHAL | ELECT 470MF 6.3V M R HA |
| C1305 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1306 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C1307 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1308 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1309 | CE+16476MRHAL | ELECT 47MF 16V M R HA(A) |
| C1310 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1311 | CE+10226MRHAL | ELECT 22MF 10V M R HA |
| C1312 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1313 | CC+50151JRSLL | CERAMIC 150PF 50V J R SL |
| C1314 | CC+50680JASLG | CERAMIC 68PF 50V J A SL G |
| C1322 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1323 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C1325 | CB+16104MRXRL | BC CON 0.1MF 16V M R XR |
| C1340 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
|  |  | **(DIODES)** |
| D1002 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1003 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1101 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1102 | SD1SS133++++T | DIODE 1SS133 (B) |
| or | SDGMA01+++++T | DIODE GMA01(B) |
| D1104 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D1301 | SD1S2473++++T | DIODE 1S2473 |
| D1302 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1305 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1340 | SD1SS133++++T | DIODE 1SS133 |
|  |  | **(INTEGRATED CIRCUITS)** |
| IC1001 | SIAN3320K++++ | IC AN3320K |
| IC1002 | SIAN3215K++++ | IC AN3215K |
|  |  | **(COILS)** |
| L1001 | 4–253V–97125 | HF CHOKE 100UH |
| L1002 | 4–253V–97015 | HF CHOKE 150UH |
| L1003 | 4–253V–97012 | HF CHOKE 82UH |
| L1004 | 4–253V–97125 | HF CHOKE 100UH |
| L1005 | 4–253V–97111 | HF CHOKE 6.8UH |
| L1006 | 4–253V–97003 | HF CHOKE 15UH |
| L1007 | 4–253V–97003 | HF CHOKE 15UH |
| L1008 | 4–253V–97014 | HF CHOKE 120UH |
| L1009 | 4–253V–97125 | HF CHOKE 100UH |
| L1104 | 4–253V–97009 | HF CHOKE 47UH |
| L1105 | 4–253V–97125 | HF CHOKE 100UH |
| L1106 | 4–253V–97006 | HF CHOKE 27UH |
| L1107 | 4–253V–98024 | HF CHOKE 22UH(A) |
| or | 4–253V–97005 | HF CHOKE 22UH(B) |
| L1109 | 4–253V–97003 | HF CHOKE 15UH |
| L1301 | 4–253V–97125 | HF CHOKE 100UH |
| L1303 | 4–253V–97125 | HF CHOKE 100UH |
| L1304 | 4–253V–97003 | HF CHOKE 15UH |
|  |  | **(TRANSISTORS)** |
| Q1001 | STA608+F++++B | TR 2SA608 F |
| Q1002 | STC536+F++++B | TR 2SC536 F |
| Q1003 | STC536+E++++B | TR 2SC536 E |

| Location | Part No. | Description |
|---|---|---|
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1004 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1005 | STC536+E++++1 | TR 2SC536 E |
| or | STC536+F++++1 | TR 2SC536 F |
| or | STC1740Q++++1 | TR 2SC1740 Q SP |
| or | STC1740R++++1 | TR 2SC1740 R SP |
| Q1080 | STA608+E++++B | TR 2SA608 E |
| or | STA608+F++++B | TR 2SA608 F |
| or | STA1309Q++++T | TR 2SA1309 Q |
| or | STA1309R++++T | TR 2SA1309 R |
| Q1081 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1082 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1083 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1101 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1102 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1103 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1105 | STA608+E++++B | TR 2SA608 E |
| or | STA608+F++++B | TR 2SA608 F |
| or | STA1309Q++++T | TR 2SA1309 Q |
| or | STA1309R++++T | TR 2SA1309 R |
| Q1251 | STC536+F++++B | TR 2SC536 F(B) |
| or | STC1740R++++B | TR 2SC1740 R SP(B) |
| Q1252 | STC536+F++++B | TR 2SC536 F(B) |
| or | STC1740R++++B | TR 2SC1740 R SP(B) |
| Q1253 | STC536+F++++1 | TR 2SC536 F(A) |
| or | STC1740R++++1 | TR 2SC1740 R SP(A) |
| Q1301 | STA608+E++++B | TR 2SA608 E |
| or | STA608+F++++B | TR 2SA608 F |
| or | STA1309Q++++T | TR 2SA1309 Q |
| or | STA1309R++++T | TR 2SA1309 R |
| Q1302 | STA608+E++++B | TR 2SA608 E |
| or | STA608+F++++B | TR 2SA608 F |
| or | STA1309Q++++T | TR 2SA1309 Q |
| or | STA1309R++++T | TR 2SA1309 R |
| Q1303 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1304 | STA984+E++++T | TR 2SA984 E |
| or | STA984+F++++T | TR 2SA984 F |
| or | STA562+Y++++T | TR 2SA562 Y |
| Q1306 | STC536+E++++1 | TR 2SC536 E |
| or | STC536+F++++1 | TR 2SC536 F |
| or | STC1740Q++++1 | TR 2SC1740 Q SP |
| or | STC1740R++++1 | TR 2SC1740 R SP |
| Q1307 | STA984+E++++T | TR 2SA984 E |
| or | STA984+F++++T | TR 2SA984 F |
| or | STA562+Y++++T | TR 2SA562 Y |
| Q1308 | STC536+E++++1 | TR 2SC536 E |
| or | STC536+F++++1 | TR 2SC536 F |
| or | STC1740Q++++1 | TR 2SC1740 Q SP |

| Location | Part No. | Description |
|---|---|---|
| or | STC1740R++++1 | TR 2SC1740 R SP |
| Q1340 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| or | STC26690++++T | TR 2SC2669 O |
| or | STC2669Y++++T | TR 2SC2669 Y |
| | | **(RESISTORS)** |
| R1001 | 401 026 6441 | CARBON 39 JA 1/6 |
| R1002 | 401 025 4240 | CARBON 1.8K JA 1/6 |
| R1003 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R1004 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R1005 | 401 026 6441 | CARBON 39 JA 1/6 |
| R1006 | 401 025 4240 | CARBON 1.8K JA 1/6 |
| R1007 | 401 026 8148 | CARBON 4.7 JA 1/6 |
| R1008 | 401 025 4646 | CARBON 18K JA 1/6 |
| R1009 | 401 027 5245 | CARBON 680 JA 1/6 |
| R1010 | 401 026 4348 | CARBON 3.3K JA 1/6 |
| R1011 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1012 | 401 024 6740 | CARBON 100 JA 1/6 |
| R1013 | 401 025 3322 | CARBON 16K JA 1/6 |
| R1014 | 401 025 0648 | CARBON 1.3K JA 1/6 |
| R1015 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1016 | 401 026 0647 | CARBON 270 JA 1/6 |
| R1017 | 401 026 2730 | CARBON 300 JA 1/6 |
| R1018 | 401 025 7449 | CARBON 220 JA 1/6 |
| R1019 | 401 027 2343 | CARBON 560 JA 1/6 |
| R1020 | 401 027 5245 | CARBON 680 JA 1/6 |
| R1021 | 401 027 2343 | CARBON 560 JA 1/6 |
| R1022 | 401 027 6925 | CARBON 750 JA 1/6 |
| R1023 | 401 025 1645 | CARBON 1.5K JA 1/6 |
| R1024 | 401 025 4240 | CARBON 1.8K JA 1/6 |
| R1025 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1026 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1027 | 401 024 9345 | CARBON 1.2K JA 1/6 |
| R1028 | 401 024 9345 | CARBON 1.2K JA 1/6 |
| R1029 | 401 024 9345 | CARBON 1.2K JA 1/6 |
| R1030 | 401 026 6649 | CARBON 390 JA 1/6 |
| R1031 | 401 024 7450 | CARBON 10K JA 1/6 |
| R1032 | 401 025 9522 | CARBON 240 JA 1/6 |
| R1033 | 401 025 3015 | CARBON 1.6K JA 1/6 |
| R1034 | 401 025 4240 | CARBON 1.8K JA 1/6 |
| R1035 | 401 026 9640 | CARBON 470 JA 1/6 |
| R1036 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R1037 | 401 025 1348 | CARBON 150 JA 1/6 |
| R1038 | 401 025 3847 | CARBON 180 JA 1/6 |
| R1039 | 401 024 7450 | CARBON 10K JA 1/6 |
| R1040 | 401 027 2343 | CARBON 560 JA 1/6 |
| R1041 | 401 026 1040 | CARBON 2.7K JA 1/6 |
| R1042 | 401 025 1645 | CARBON 1.5K JA 1/6 |
| R1043 | 401 025 4240 | CARBON 1.8K JA 1/6 |
| R1044 | 401 025 1645 | CARBON 1.5K JA 1/6 |
| R1045 | 401 026 0647 | CARBON 270 JA 1/6 |
| R1046 | 401 025 0648 | CARBON 1.3K JA 1/6 |
| R1047 | 401 026 6649 | CARBON 390 JA 1/6 |
| R1048 | 401 027 8345 | CARBON 820 JA 1/6 |
| R1049 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R1050 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1051 | 401 026 4348 | CARBON 3.3K JA 1/6 |
| R1052 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1053 | 401 026 1040 | CARBON 2.7K JA 1/6 |
| R1054 | 401 025 0836 | CARBON 13K JA 1/6 |
| R1055 | 401 027 7249 | CARBON 7.5K JA 1/6 |
| R1056 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1057 | 401 027 5542 | CARBON 6.8K JA 1/6 |
| R1058 | 401 025 1942 | CARBON 15K JA 1/6 |
| R1059 | 401 025 1942 | CARBON 15K JA 1/6 |
| R1060 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R1061 | 401 027 0547 | CARBON 470K JA 1/6 |
| R1062 | 401 026 7646 | CARBON 390K JA 1/6 |
| R1063 | 401 027 8642 | CARBON 8.2K JA 1/6 |
| R1064 | 401 026 7448 | CARBON 39K JA 1/6 |
| R1065 | 401 025 0044 | CARBON 120K JA 1/6 |
| R1066 | 401 026 9947 | CARBON 4.7K JA 1/6 |

| Location | Part No. | Description |
|---|---|---|
| R1067 | 401 [illegible] 7044 | CARBON 1K JA 1/6 |
| R1068 | 401 [illegible] 6740 | CARBON 100 JA 1/6 |
| R1069 | 401 [illegible] 0836 | CARBON 13K JA 1/6 |
| R1070 | 401 [illegible] 0031 | CARBON 910 JA 1/6 |
| R1080 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1081 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1082 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1083 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R1084 | 401 027 5245 | CARBON 680 JA 1/6 |
| R1085 | 401 026 6649 | CARBON 390 JA 1/6 |
| R1087 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R1088 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R1089 | 401 026 1347 | CARBON 27K JA 1/6 |
| R1090 | 401 025 0648 | CARBON 1.3K JA 1/6 |
| R1101 | 401 024 7044 | CARBON 1K JA 1/6(A) |
| or | 401 026 3945 | CARBON 330 JA 1/6(B) |
| R1102 | 401 025 6125 | CARBON 200 JA 1/6 |
| R1103 | 401 026 6649 | CARBON 390 JA 1/6 |
| R1105 | 401 025 4240 | CARBON 1.8K JA 1/6 |
| R1106 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1107 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R1108 | 401 024 7450 | CARBON 10K JA 1/6 |
| R1109 | 401 025 8248 | CARBON 22K JA 1/6 |
| R1112 | 401 026 9640 | CARBON 470 JA 1/6 |
| R1114 | 401 027 5245 | CARBON 680 JA 1/6 |
| R1115 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R1116 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R1117 | 401 026 5830 | CARBON 3.6K JA 1/6 |
| R1118 | 401 026 9640 | CARBON 470 JA 1/6 |
| R1119 | 401 026 6649 | CARBON 390 JA 1/6 |
| R1120 | 401 027 8642 | CARBON 8.2K JA 1/6 |
| R1121 | 401 024 8041 | CARBON 1M JA 1/6 |
| R1122 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1123 | 401 024 7747 | CARBON 100K JA 1/6 |
| R1124 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1125 | 401 024 7747 | CARBON 100K JA 1/6(B) |
| R1126 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1127 | 401 026 9640 | CARBON 470 JA 1/6 |
| R1128 | 401 026 9640 | CARBON 470 JA 1/6 |
| R1129 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1130 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1131 | 401 025 1645 | CARBON 1.5K JA 1/6 |
| R1132 | 401 024 7450 | CARBON 10K JA 1/6 |
| R1133 | 401 027 6925 | CARBON 750 JA 1/6(A) |
| or | 401 026 8534 | CARBON 430 JA 1/6(B) |
| R1134 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1251 | 401 025 8248 | CARBON 22K JA 1/6(B) |
| R1252 | 401 024 7044 | CARBON 1K JA 1/6(B) |
| R1253 | 401 025 8248 | CARBON 22K JA 1/6(B) |
| R1254 | 401 025 7845 | CARBON 2.2K JA 1/6(B) |
| R1255 | 401 025 7845 | CARBON 2.2K JA 1/6(B) |
| R1256 | 401 026 1000 | CARBON 2.7K JA 1/6(A) |
| R1257 | 401 026 1040 | CARBON 2.7K JA 1/4(A) |
| R1301 | 401 022 0859 | CARBON 68 JA 1/4 |
| R1302 | 401 027 2343 | CARBON 560 JA 1/6 |
| R1303 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1304 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1305 | 401 028 0031 | CARBON 910 JA 1/6 |
| R1306 | 401 026 5830 | CARBON 3.6K JA 1/6 |
| R1307 | 401 025 1645 | CARBON 1.5K JA 1/6 |
| R1308 | 401 027 6925 | CARBON 750 JA 1/6 |
| R1309 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R1310 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R1313 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1314 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R1315 | 401 025 8248 | CARBON 22K JA 1/6 |
| R1316 | 401 025 8248 | CARBON 22K JA 1/6 |
| R1318 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R1319 | 401 027 0349 | CARBON 47K JA 1/6 |
| R1320 | 401 027 0349 | CARBON 47K JA 1/6 |
| R1321 | 401 024 9048 | CARBON 120 JA 1/6 |
| R1323 | 401 025 8248 | CARBON 22K JA 1/6 |
| R1324 | 401 021 0761 | CARBON 56 JA 1/4 |
| R1325 | 401 026 9947 | CARBON 4.7K JA 1/6 |

| Location | Part No. | Description |
|---|---|---|
| R1335 | 401 026 1040 | CARBON 2.7K JA 1/6 |
| R1336 | 401 026 1040 | CARBON 2.7K JA 1/6 |
| R1338 | 401 026 1040 | CARBON 2.7K JA 1/6 |
| R1340 | 401 027 6648 | CARBON 75 JA 1/6 |
| R1343 | 401 024 7450 | CARBON 10K JA 1/6 |
| R1344 | 401 026 4645 | CARBON 33K JA 1/6 |
| R1345 | 401 026 0647 | CARBON 270 JA 1/6 |
| R1346 | 401 019 9660 | CARBON 47 JA 1/4 |
| | | **(SEMI VARIABLE RESISTORS)** |
| SVR1001 | 4–222V–69104 | 2K OHM |
| or | 4–222V–69004 | 2K OHM |
| or | 4–222V–68908 | 2.2K OHM |
| SVR1002 | 4–222V–69110 | 50K OHM |
| or | 4–222V–69010 | 50K OHM |
| or | 4–222V–68916 | 47K OHM |
| SVR1004 | 4–222V–69107 | 10K OHM |
| or | 4–222V–69007 | 10K OHM |
| or | 4–222V–68912 | 10K OHM |
| SVR1005 | 4–222V–69107 | 10K OHM |
| or | 4–222V–69007 | 10K OHM |
| or | 4–222V–68912 | 10K OHM |
| SVR1006 | 4–222V–69110 | 50K OHM |
| or | 4–222V–69010 | 50K OHM |
| or | 4–222V–68916 | 47K OHM |
| SVR1007 | 4–222V–69110 | 50K OHM |
| or | 4–222V–69010 | 50K OHM |
| or | 4–222V–68916 | 47K OHM |
| SVR1008 | 4–222V–69110 | 50K OHM |
| or | 4–222V–69010 | 50K OHM |
| or | 4–222V–68916 | 47K OHM |
| SVR1009 | 4–222V–69110 | 50K OHM |
| or | 4–222V–69010 | 50K OHM |
| or | 4–222V–68916 | 47K OHM |
| SVR1010 | 4–222V–69103 | 1K OHM |
| or | 4–222V–69003 | 1K OHM |
| or | 4–222V–68906 | 1K OHM |
| SVR1011 | 4–222V–69100 | 200 OHM |
| or | 4–222V–69000 | 200 OHM |
| or | 4–222V–68902 | 220 OHM |
| | | **(SWITCH)** |
| S1001 | 4–231V–20600 | TUNER/EXT IN |
| | | **(MISCELLANEOUS)** |
| CN1010 | 4–235V–45200 | AUDIO/VIDEO CONNECTOR |
| DL1001 | 4–284V–18350 | DELAY LINE |
| or | 4–284V–18300 | DELAY LINE |
| DL1101 | 4–284V–19400 | DELAY LINE |
| DL1301 | 4–228V–16100 | LC PACK |
| or | 4–228V–19700 | LC PACK |
| F1001 | 4–228V–19400 | LC PACK |
| F1002 | 4–953V–22000 | FILTER |
| F1101 | 4–228V–19300 | LC PACK |
| F1102 | 4–953V–23000 | FILTER |
| X1101 | 4–225V–23400 | CRYSTAL |

## VD-1 BOARD (AUDIO)
## NO.143-0-233V-08301(A)/143-0-233V-08342(B)

| Location | Part No. | Description |
|---|---|---|
| | | **(CAPACITORS)** |
| C2001 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2003 | CE+25475MRHAL | ELECT 4.7MF 25V M R HA |
| C2004 | CB+25273KRXRL | BC CON 0.027MF 25V K R XR |
| C2005 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2007 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2008 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C2009 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C2011 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2013 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C2014 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C2015 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2016 | CC+50821KAYBG | CERAMIC 820PF 50V K A YB |
| C2017 | CE+50334MRHAL | ELECT 0.33MF 50V M R HA |
| C2018 | CB+25183KRXRL | BC CON 0.018MF 25V K R XR |
| C2019 | CB+16392KAXRG | BC CON 0.0039MF 16V K AXR |
| C2020 | CB+16332KAXRG | BC CON 0.0033MF 16V K AXR |
| C2021 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C2022 | CC+50221KAYBG | CERAMIC 220PF 50V K A YB |
| C2023 | CN100273JM++S | POLYPRO 0.027MF 100V J |
| C2024 | CE+16107MRHAL | ELECT 100MF 16V M R HA |
| C2025 | CB+25273KRXRL | BC CON 0.027MF 25V K R XR |
| C2026 | CB+16332KAXRG | BC CON 0.0033MF 16V K AXR |
| C2027 | CB+16472KAXRG | BC CON 0.0047MF 16V K AXR |
| C2028 | CB+16332KAXRG | BC CON 0.0033MF 16V K AXR |
| | | **(CAPACITORS)** |
| D2001 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| | | **(INTEGRATED CIRCUIT)** |
| IC2001 | SILA7090+++++ | IC LA7090 |
| | | **(COILS)** |
| L2001 | 4–253V–76246 | HF CHOKE 6.8MH |
| L2002 | 4–253V–95801 | HF CHOKE 27MH |
| L2003 | 4–253V–76233 | HF CHOKE 560UH |
| | | **(TRANSISTORS)** |
| Q2001 | STD1011S++++T | TR 2SD1011 S |
| or | STD1011R++++T | TR 2SD1011 R |
| or | STD1011T++++T | TR 2SD1011 T |
| or | STC3495+++++T | TR 2SC3495 |
| Q2002 | STD1011S++++T | TR 2SD1011 S |
| or | STD1011R++++T | TR 2SD1011 R |
| or | STD1011T++++T | TR 2SD1011 T |
| or | STC3495+++++T | TR 2SC3495 |
| Q2003 | STA1016G++++T | TR 2SA1016 G |
| or | STA1016F++++T | TR 2SA1016 F |
| Q2004 | STC945+Q+++AT | TR 2SC945A Q |
| or | STC945+P+++AT | TR 2SC945A P |
| Q2005 | STC536+G++++T | TR 2SC536 G |
| or | STC536+F++++T | TR 2SC536 F |
| Q2006 | STC536+G++++T | TR 2SC536 G |
| or | STC536+F++++T | TR 2SC536 F |
| | | **(RESISTORS)** |
| R2001 | 401 025 4646 | CARBON 18K JA 1/6 |
| R2002 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R2003 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R2005 | 401 024 7450 | CARBON 10K JA 1/6 |
| R2006 | 401 027 1643 | CARBON 5.1K JA 1/6 |
| R2007 | 401 027 8642 | CARBON 8.2K JA 1/6 |
| R2008 | 401 025 9057 | CARBON 2.2M JA 1/6 |
| R2012 | 401 024 6740 | CARBON 100 JA 1/6 |
| R2013 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R2014 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R2015 | 401 024 7450 | CARBON 10K JA 1/6 |
| R2016 | 401 024 7450 | CARBON 10K JA 1/6 |
| R2017 | 401 026 4348 | CARBON 3.3K JA 1/6 |
| R2018 | 401 026 2938 | CARBON 3K JA 1/6 |
| R2020 | 401 027 7249 | CARBON 7.5K JA 1/6 |
| R2021 | 401 024 7450 | CARBON 10K JA 1/6 |
| R2022 | 401 027 5542 | CARBON 6.8K JA 1/6 |
| R2023 | 401 025 1348 | CARBON 150 JA 1/6 |
| R2024 | 401 025 4943 | CARBON 180K JA 1/6 |
| R2025 | 401 027 4347 | CARBON 6.2K JA 1/6 |
| R2026 | 401 026 1040 | CARBON 2.7K JA 1/6 |
| R2027 | 401 027 5245 | CARBON 680 JA 1/6 |
| R2028 | 401 024 9741 | CARBON 12K JA 1/6 |
| R2029 | 401 027 2343 | CARBON 560 JA 1/6 |
| R2031 | 402 004 0008 | FUSIBLE RES 10 JA 1/4 |

| Location | Part No. | Description |
|---|---|---|
| R2032 | 401 026 4645 | CARBON 33K JA 1/6 |
| R2033 | 401 026 4645 | CARBON 33K JA 1/6 |
| R2049 | 401 025 1942 | CARBON 15K JA 1/6 |
| | | **(SEMI VARIABLE RESISTORS)** |
| SVR2001 | 4–222V–68918 | 100K OHM |
| or | 4–222V–69011 | 100K OHM |
| or | 4–222V–69111 | 100K OHM |
| SVR2002 | 4–222V–68912 | 10K OHM |
| or | 4–222V–69007 | 10K OHM |
| or | 4–222V–69107 | 10K OHM |

## VD-1 BOARD (SERVO)
## NO.143-0-233V-08301(A)/143-0-233V-08342(B)

| Location | Part No. | Description |
|---|---|---|
| | | **(COMPOSITE)** |
| B4002 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4003 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4004 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4005 | 4–202V–14900 | DIODE DA203 |
| B4201 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4202 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4203 | SRA1345+++++T | TR MD 2SA1345 |
| B4204 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4205 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4206 | SRA1345+++++T | TR MD 2SA1345 |
| | | **(CAPACITORS)** |
| C4001 | CC+50221KAYBG | CERAMIC 220PF 50V K A YB |
| C4002 | CE+25106MVLRS | ELECT 10MF 25V M V LR |
| or | CT+16106KKD+S | TANTALUM 10MF 16V K |
| C4003 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4004 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4005 | CE+25106MVLRS | ELECT 10MF 25V M V LR |
| or | CT+16106KKD+S | TANTALUM 10MF 16V K |
| C4006 | CC+50560JASLG | CERAMIC 56PF 50V J A SL G |
| C4007 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4008 | CB+16682KAXRG | BC CON 0.0068MF 16V K AXR |
| C4009 | CB+16682KAXRG | BC CON 0.0068MF 16V K AXR |
| C4012 | CB+25104MRXRL | BC CON 0.1MF 25V M R XR |
| C4013 | CE+16476MRHAL | ELECT 47MF 16V M R HA |
| C4014 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4015 | CM+50103KC++L | MYLAR 0.01MF 50V K C |
| C4016 | CA+25224KV++S | ALUMINUM 0.22MF 25V K |
| or | CF+50224JM++S | THIN FILM 0.22MF 50V J |
| or | CF+63224JM++S | THIN FILM 0.22MF 63V J |
| C4017 | CF+50394JM++S | THIN FILM 0.39MF 50V J |
| or | CF+63394JM++S | THIN FILM 0.39MF 63V J |
| C4018 | CM+50223KC++L | MYLAR 0.022MF 50V K C |
| C4019 | CM+50223KC++L | MYLAR 0.022MF 50V K C |
| C4020 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4021 | CE+16106MVHAS | ELECT 10MF 16V M V HA |
| C4022 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C4023 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4024 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4025 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4029 | CM+50333KC++S | MYLAR 0.033MF 50V K C |
| C4030 | CM+50104KG++S | MYLAR 0.1MF 50V K G |
| C4031 | CM+50104KC++L | MYLAR 0.1MF 50V K C |
| C4032 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4033 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C4034 | CC+50102KAYBG | CERAMIC 0.001MF 50V K AYB |
| C4035 | CE+16336MVHAS | ELECT 33MF 16V M V HA |
| C4036 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C4037 | CE+16336MRHAL | ELECT 33MF 16V M R HA |
| C4038 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4039 | CM+50154KC++L | MYLAR 0.15MF 50V K C |
| C4040 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4041 | CE+50105MVHAS | ELECT 1MF 50V M V HA |
| C4042 | CC+50102KAYBG | CERAMIC 0.001MF 50V K AYB |
| C4043 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4044 | CC+50102KAYBG | CERAMIC 0.001MF 50V K AYB |
| C4045 | CE+16476MRHAL | ELECT 47MF 16V M R HA |
| C4201 | CM+50332KC++L | MYLAR 0.0033MF 50V K C |
| C4202 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4203 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4204 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C4205 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4206 | CM+50103KC++L | MYLAR 0.01MF 50V K C |
| C4207 | CM+50153KC++L | MYLAR 0.015MF 50V K C |
| C4208 | CM+50104KC++L | MYLAR 0.1MF 50V K C |
| C4209 | CM+50473KC++L | MYLAR 0.047MF 50V K C |
| C4211 | CM+50332KC++L | MYLAR 0.0033MF 50V K C |
| C4212 | CM+50332KC++L | MYLAR 0.0033MF 50V K C |
| | | **(DIODES)** |
| D4001 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4002 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4003 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4005 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4006 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4008 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4009 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4201 | SDDS442+++++T | DIODE DS442 |
| D4203 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| | | **(INTEGRATED CIRCUITS)** |
| IC4001 | SILC74118011+ | IC LC7411-8011 |
| IC4002 | SILA7113+++++ | IC LA7113 |
| IC4003 | SITC4013BP+++ | IC TC4013BP |
| or | SILC4013B++++ | IC LC4013B |
| IC4201 | SIBA855A+++++ | IC BA855A |
| | | **(TRANSISTORS)** |
| Q4001 | STC945+P+++AT | TR 2SC945A P |
| or | STC2603F++++T | TR 2SC2603 F |
| Q4002 | STC945+P+++A+ | TR 2SC945A P |
| or | STC2603F+++++ | TR 2SC2603 F |
| Q4201 | STA933+Q++++T | TR 2SA933 Q |
| or | STA933+R++++T | TR 2SA933 R |
| | | **(RESISTORS)** |
| R4001 | 401 012 8165 | CARBON 100K JA 1/4 |
| R4002 | 401 012 7069 | CARBON 10K JA 1/4 |
| R4003 | 401 012 7069 | CARBON 10K JA 1/4 |
| R4004 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4005 | 401 012 7069 | CARBON 10K JA 1/4 |
| R4006 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4007 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4008 | 401 026 4645 | CARBON 33K JA 1/6 |
| R4009 | 401 024 7747 | CARBON 100K JA 1/6 |
| R4010 | 401 024 7747 | CARBON 100K JA 1/6 |
| R4011 | 401 027 0547 | CARBON 470K JA 1/6 |
| R4012 | 401 024 7044 | CARBON 1K JA 1/6 |
| R4013 | 401 027 3043 | CARBON 56K JA 1/6 |
| R4014 | 401 026 4942 | CARBON 330K JA 1/6 |

| Location | Part No. | Description |
|---|---|---|
| R4016 | 401 027 3043 | CARBON 56K JA 1/6 |
| R4017 | 401 027 3043 | CARBON 56K JA 1/6 |
| R4018 | 401 027 6143 | CARBON 680K JA 1/6 |
| R4019 | 401 026 7448 | CARBON 39K JA 1/6 |
| R4020 | 401 025 8743 | CARBON 220K JA 1/6 |
| R4021 | 401 024 7044 | CARBON 1K JA 1/6 |
| R4022 | 401 024 6740 | CARBON 100 JA 1/6 |
| R4023 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4024 | 401 012 5768 | CARBON 1K JA 1/4 |
| R4025 | 401 024 7400 | CARBON 10K JA 1/6 |
| R4026 | 401 024 7044 | CARBON 1K JA 1/6 |
| R4027 | 401 024 7044 | CARBON 1K JA 1/6 |
| R4028 | 401 025 4646 | CARBON 18K JA 1/6 |
| R4029 | 401 026 4348 | CARBON 3.3K JA 1/6 |
| R4030 | 401 025 7449 | CARBON 220 JA 1/6 |
| R4031 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R4032 | 401 026 4645 | CARBON 33K JA 1/6 |
| R4033 | 401 026 4645 | CARBON 33K JA 1/6 |
| R4034 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R4035 | 401 027 5948 | CARBON 68K JA 1/6 |
| R4036 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4037 | 401 024 7044 | CARBON 1K JA 1/6 |
| R4038 | 401 027 8147 | CARBON 82 JA 1/6 |
| R4039 | 401 024 7044 | CARBON 1K JA 1/6 |
| R4040 | 401 027 5245 | CARBON 680 JA 1/6 |
| R4041 | 401 026 9640 | CARBON 470 JA 1/6 |
| R4042 | 401 026 4942 | CARBON 330K JA 1/6 |
| R4043 | 401 021 3069 | CARBON 5.6K JA 1/4 |
| R4044 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R4045 | 401 025 8743 | CARBON 220K JA 1/6 |
| R4046 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R4047 | 401 024 7747 | CARBON 100K JA 1/6 |
| R4048 | 401 025 4943 | CARBON 180K JA 1/6 |
| R4049 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4050 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4051 | 401 048 7034 | MT-FILM 4.7K FD 1/4 |
| R4052 | 401 048 7034 | MT-FILM 4.7K FD 1/4 |
| R4053 | 401 025 4943 | CARBON 180K JA 1/6 |
| R4054 | 401 027 0547 | CARBON 470K JA 1/6 |
| R4055 | 401 016 3869 | CARBON 2.2K JA 1/4 |
| R4056 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R4058 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R4059 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4060 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4061 | 401 024 7004 | CARBON 1K JA 1/6 |
| R4062 | 401 025 8743 | CARBON 220K JA 1/6 |
| R4063 | 401 024 7707 | CARBON 100K JA 1/6 |
| R4064 | 401 024 7747 | CARBON 100K JA 1/6 |
| R4065 | 401 025 1942 | CARBON 15K JA 1/6 |
| R4066 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4067 | 401 026 9640 | CARBON 470 JA 1/6 |
| R4071 | 401 012 5768 | CARBON 1K JA 1/4 |
| R4075 | 401 024 7747 | CARBON 100K JA 1/6 |
| R4076 | 401 024 7747 | CARBON 100K JA 1/6 |
| R4077 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4079 | 401 025 2345 | CARBON 150K JA 1/6 |
| R4201 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4202 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4203 | 401 027 3043 | CARBON 56K JA 1/6 |
| R4204 | 401 025 8248 | CARBON 22K JA 1/6 |
| R4205 | 401 025 8743 | CARBON 220K JA 1/6 |
| R4206 | 401 025 1942 | CARBON 15K JA 1/6 |
| R4207 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R4208 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4209 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4210 | 401 027 3043 | CARBON 56K JA 1/6 |
| R4211 | 401 024 7747 | CARBON 100K JA 1/6 |
| R4212 | 401 026 1347 | CARBON 27K JA 1/6 |
| R4213 | 401 025 2345 | CARBON 150K JA 1/6 |
| R4214 | 401 025 3530 | CARBON 160K JA 1/6 |
| R4215 | 401 025 2345 | CARBON 150K JA 1/6 |
| R4216 | 401 027 9045 | CARBON 82K JA 1/6 |
| R4217 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4218 | 401 027 9045 | CARBON 82K JA 1/6 |
| R4219 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4220 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4221 | 401 024 7044 | CARBON 1K JA 1/6 |
| R4222 | 401 024 7044 | CARBON 1K JA 1/6 |
| R4225 | 401 024 7044 | CARBON 1K JA 1/6 |
| R4226 | 401 027 0349 | CARBON 47K JA 1/6 |
| R4227 | 401 024 7747 | CARBON 100K JA 1/6 |
| R4228 | 401 024 7450 | CARBON 10K JA 1/6 |
| R4229 | 401 026 1644 | CARBON 270K JA 1/6 |
|  |  | **(SEMI VARIABLE RESISTORS)** |
| SVR4001 | 4–222V–69112 | 200K OHM |
| or | 4–222V–68920 | 220K OHM |
| or | 4–222V–69012 | 200K OHM |
| SVR4002 | 4–222V–69112 | 200K OHM |
| or | 4–222V–68920 | 220K OHM |
| or | 4–222V–69012 | 200K OHM |
| SVR4003 | 4–222V–69112 | 200K OHM |
| or | 4–222V–68920 | 220K OHM |
| or | 4–222V–69012 | 200K OHM |
|  |  | **(VARIABLE RESISTOR)** |
| VR4004 | 4–222V–29600 | 100K OHM |

## VD-2 BOARD (VIDEO)
## NO.143-0-233V-08400

| Location | Part No. | Description |
|---|---|---|
|  |  | **(COMPOSITE)** |
| B1201 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
|  |  | **(CAPACITORS)** |
| C1201 | CB+16103MA+YG | BC CON 0.01MF 16V M |
| C1202 | CE+16106MRHAL | ELECT 10MF 16V M |
| C1203 | CB+16103MA+YG | BC CON 0.01MF 16V M |
| C1204 | CC+50101JRCHL | CERAMIC 100PF 50V J |
| C1206 | CE+16106MRHAL | ELECT 10MF 16V M |
| C1207 | CB+16103MA+YG | BC CON 0.01MF 16V M |
| C1208 | CE6R3476MRHAL | ELECT 47MF 6.3V M |
|  |  | **(DIODES)** |
| D1201 | SD1SS133++++T | DIODE 1SS133 |
| D1202 | SD1SS133++++T | DIODE 1SS133 |
|  |  | **(INTEGRATED CIRCUITS)** |
| IC1201 | SIBA7025L++++ | IC BA7025L |
|  |  | **(TRANSISTORS)** |
| Q1201 | STA1309R++++T | TR 2SA1309 R |
| or | STA608+F++++B | TR 2SA608 F |
| Q1202 | STC2669Y++++T | TR 2SC2669 Y |
| or | STC536+F++++B | TR 2SC536 F |
|  |  | **(RESISTORS)** |
| R1201 | 401 025 8248 | CARBON 22K JA 1/6 |
| R1202 | 401 025 8248 | CARBON 22K JA 1/6 |
| R1203 | 401 025 8248 | CARBON 22K JA 1/6 |
| R1204 | 401 024 7450 | CARBON 10K JA 1/6 |
| R1205 | 401 025 2830 | CARBON 160 JA 1/6 |
| R1206 | 401 025 2345 | CARBON 150K JA 1/6 |
| R1207 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R1208 | 401 025 8248 | CARBON 22K JA 1/6 |
| R1209 | 401 024 7450 | CARBON 10K JA 1/6 |
| R1211 | 401 025 8248 | CARBON 22K JA 1/6 |
| R1212 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R1213 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R1216 | 401 024 7747 | CARBON 100K JA 1/6 |

| Location | Part No. | Description |
|---|---|---|
| | | **(TRANSFORMER)** |
| T1201 | 4−255V−11800 | CHOKE COIL |
| | | **(MISCELLANEOUS)** |
| CF1201 | 4−953V−22100 | FILTER |

## VD-5 BOARD
## NO.143-0-233V-21100(B)/143-0-233V-21122(A)

| Location | Part No. | Description |
|---|---|---|
| | | **(SWITCH)** |
| S1451 | 4−248V−00400 | SLIDE SWITCH |

## HIC BOARD (VIDEO)
## NO.143-0-208V-02600

| Location | Part No. | Description |
|---|---|---|
| | | **(CAPACITORS)** |
| C1901 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1902 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1903 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1904 | CT+16105MZSVZ | CHIP TANTAL 1MF 16V M SV |
| C1905 | CC+25104ZZYFR | CHIP CERA 0.1MF 25V Z YF |
| C1906 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1907 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1908 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1910 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1911 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1912 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1913 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1914 | CT+25334MZSVZ | CHIP TANTAL 0.33MF 25V MS |
| C1916 | CC+25223KZYBR | CHIP CERA 0.022MF 25V K Y |
| C1917 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1918 | CC+25473ZZYFR | CHIP CERA 0.047MF 25V Z Y |
| C1919 | CC+50470JZSLR | CHIP CERA 47PF 50V J SL |
| C1920 | CC+50472KZYBR | CHIP CERA 0.0047MF 50V KY |
| C1921 | CC+50471JZSLR | CHIP CERA 470PF 50V J SL |
| C1922 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1923 | CC+50102KZYBR | CHIP CERA 0.001MF 50V K Y |
| | | **(DIODES)** |
| D1901 | SDDA204K++++Z | CHIP DIODE DA204K |
| D1902 | SDDA204K++++Z | CHIP DIODE DA204K |
| | | **(INTEGRATED CIRCUITS)** |
| IC1901 | SIAN6367S++++ | IC AN6367S |
| IC1902 | SIMN6163AS+++ | IC MN6163AS |
| | | **(TRANSISTORS)** |
| Q1901 | STC2412KR+++Z | CHIP TR 2SC2412K R |
| or | STC2412KS+++Z | CHIP TR 2SC2412K S |
| Q1902 | STC2412KR+++Z | CHIP TR 2SC2412K R |
| or | STC2412KS+++Z | CHIP TR 2SC2412K S |
| Q1903 | STC2412KR+++Z | CHIP TR 2SC2412K R |
| or | STC2412KS+++Z | CHIP TR 2SC2412K S |
| Q1904 | STA1037KR+++Z | CHIP TR 2SA1037 KR |
| or | STA1037KS+++Z | CHIP TR 2SA1037 KS |
| Q1905 | STC2412KR+++Z | CHIP TR 2SC2412K R |
| or | STC2412KS+++Z | CHIP TR 2SC2412K S |
| | | **(RESISTORS)** |
| R1901 | 401 039 0413 | MT-GLAZE 8.2K JA 1/10 |
| R1902 | 401 037 5410 | MT-GLAZE 1K JA 1/10 |
| R1903 | 401 037 9319 | MT-GLAZE 18K JA 1/10 |
| R1904 | 401 037 5410 | MT-GLAZE 1K JA 1/10 |
| R1906 | 401 037 5618 | MT-GLAZE 10K JA 1/10 |
| R1907 | 401 037 5410 | MT-GLAZE 1K JA 1/10 |
| R1908 | 401 038 4917 | MT-GLAZE 39 JA 1/10 |
| R1909 | 401 037 6615 | MT-GLAZE 120 JA 1/10 |
| R1910 | 401 038 3712 | MT-GLAZE 33K JA 1/10 |
| R1911 | 401 039 0413 | MT-GLAZE 8.2K JA 1/10 |
| R1912 | 401 037 5410 | MT-GLAZE 1K JA 1/10 |
| R1913 | 401 037 5410 | MT-GLAZE 1K JA 1/10 |
| R1914 | 401 038 9219 | MT-GLAZE 6.8K JA 1/10 |
| R1916 | 401 037 8015 | MT-GLAZE 15K JA 1/10 |
| R1919 | 401 037 6813 | MT-GLAZE 12K JA 1/10 |
| R1920 | 401 037 5717 | MT-GLAZE 100K JA 1/10 |
| R1921 | 401 037 5717 | MT-GLAZE 100K JA 1/10 |
| R1922 | 401 038 3712 | MT-GLAZE 33K JA 1/10 |
| R1923 | 401 038 0216 | MT-GLAZE 20K JA 1/10 |
| R1924 | 401 038 9219 | MT-GLAZE 6.8K JA 1/10 |
| R1925 | 401 038 2111 | MT-GLAZE 2.7K JA 1/10 |
| R1926 | 401 038 2210 | MT-GLAZE 27K JA 1/10 |
| R1927 | 401 038 0810 | MT-GLAZE 22K JA 1/10 |
| R1929 | 401 038 0810 | MT-GLAZE 22K JA 1/10 |
| R1930 | 401 037 5410 | MT-GLAZE 1K JA 1/10 |

## VP-1 BOARD (VIDEO PRE-AMP.)
## NO.143-0-233V-12400

| Location | Part No. | Description |
|---|---|---|
| | | **(CAPACITORS)** |
| C1501 | CE+16106MRAKL | ELECT 10MF 16V M R AK |
| C1502 | CE+16106MRAKL | ELECT 10MF 16V M R AK |
| C1503 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1504 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1507 | CE+50105MRAKL | ELECT 1MF 50V M R AK |
| C1508 | CB+25473KRXRL | BC CON 0.047MF 25V K R XR |
| C1509 | CE+10476MRAKL | ELECT 47MF 10V M R AK |
| C1512 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1513 | CC+50681JAYBG | CERAMIC 680PF 50V J A YB |
| C1514 | CC+50180JASLG | CERAMIC 18PF 50V J A SL G |
| C1515 | CC+50220JASLG | CERAMIC 22PF 50V J A SL G |
| C1516 | CM+50104KG++S | MYLAR 0.1MF 50V K G |
| C1525 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1526 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1529 | CE+10476MRAKL | ELECT 47MF 10V M R AK |
| C1530 | CB+25473KRXRL | BC CON 0.047MF 25V K R XR |
| C1531 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1534 | CM+50104KG++S | MYLAR 0.1MF 50V K G |
| | | **(INTEGRATED CIRCUIT)** |
| IC1501 | SIAN3313+++++ | IC AN3313 |
| | | **(COILS)** |
| L1503 | 4−253V−85825 | HF CHOKE 100UH |
| L1505 | 4−253V−85825 | HF CHOKE 100UH |
| L1506 | 4−253V−85816 | HF CHOKE 18UH |
| L1507 | 4−253V−85825 | HF CHOKE 100UH |
| | | **(TRANSISTORS)** |
| Q1502 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| or | STC26690++++T | TR 2SC2669 O |
| or | STC2669Y++++T | TR 2SC2669 Y |
| Q1503 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| or | STC26690++++T | TR 2SC2669 O |
| or | STC2669Y++++T | TR 2SC2669 Y |
| Q1504 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| Q1509 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |

| Location | Part No. | Description |
|---|---|---|
| Q1510 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
|  |  | **(RESISTORS)** |
| R1503 | 401 027 8345 | CARBON 820 JA 1/6 |
| R1504 | 401 027 8345 | CARBON 820 JA 1/6 |
| R1509 | 401 024 9345 | CARBON 1.2K JA 1/6 |
| R1510 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1511 | 401 027 8345 | CARBON 820 JA 1/6 |
| R1512 | 401 027 5245 | CARBON 680 JA 1/6 |
| R1513 | 401 026 4348 | CARBON 3.3K JA 1/6 |
| R1514 | 401 025 1645 | CARBON 1.5K JA 1/6 |
| R1515 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1533 | 401 012 3467 | CARBON 10 JA 1/4 |
| R1534 | 401 024 6443 | CARBON 10 JA 1/6 |
| R1535 | 401 027 5542 | CARBON 6.8K JA 1/6 |
| R1536 | 401 027 5542 | CARBON 6.8K JA 1/6 |
| R1537 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1538 | 401 024 7044 | CARBON 1K JA 1/6 |
| R1539 | 401 025 1645 | CARBON 1.5K JA 1/6 |

## SY-1 BOARD (SYSTEM CONTROL)
## NO.143-0-233V-05904

| Location | Part No. | Description |
|---|---|---|
|  |  | **(COMPOSITE)** |
| B3011 | SRC3399++++++ | TR MD 2SC3399 |
| B3012 | SRC3399++++++ | TR MD 2SC3399 |
| B3013 | SRC3399++++++ | TR MD 2SC3399 |
| B3014 | SRC3399++++++ | TR MD 2SC3399 |
| B3015 | SRC3399++++++ | TR MD 2SC3399 |
| B3019 | SRA1345++++++ | TR MD 2SA1345 |
|  |  | **(CAPACITORS)** |
| C3001 | CC+50300JASLG | CERAMIC 30PF 50V J A SL G |
| C3002 | CC+50300JASLG | CERAMIC 30PF 50V J A SL G |
| C3003 | CE+50474MRHAL | ELECT 0.47MF 50V M R HA |
| C3004 | CB+25104MRF+L | BC CON 0.1MF 25V M R F |
| C3005 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C3006 | CW+16106MRNPL | NON POLARIZED 10MF 16V M R NP |
| C3007 | CC+50562KRYBL | CERAMIC 0.0056MF 50V K RY |
| C3008 | CE6R3336MRHAL | ELECT 33MF 6.3V M R HA |
| C3009 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C3010 | CB+25104MRF+L | BC CON 0.1MF 25V M R F |
| C3011 | CB+25104MRF+L | BC CON 0.1MF 25V M R F |
| C3012 | CE+50225MRHAL | ELECT 2.2MF 50V M R HA |
| C3013 | CF+50104JR++L | THIN FILM 0.1MF 50V J |
| C3014 | CW+50105MRNPL | NON POLARIZED 1MF 50V M R NP |
| C3019 | CC+50221KAYBG | CERAMIC 220PF 50V K A YB |
|  |  | **(DIODES)** |
| D3001 | SDGZA047Z+++T | ZENER DIODE GZA4.7Z |
| or | SD05Z047Z+++T | ZENER DIODE 05Z4.7Z |
| D3002 | SDGZA056X+++T | ZENER DIODE GZA5.6X |
| or | SD05Z056X+++T | ZENER DIODE 05Z5.6X |
| D3003 | SDGZA036Z+++T | ZENER DIODE GZA3.6Z |
| or | SD05Z036Z+++T | ZENER DIODE 05Z3.6Z |
| D3005 | SDGZA033Y+++T | ZENER DIODE GZA3.3Y |
| or | SD05Z033Y+++T | ZENER DIODE 05Z3.3Y |
| D3011 | SD1SS133++++T | DIODE 1SS133 |
| D3012 | SD1SS133++++T | DIODE 1SS133 |
|  |  | **(INTEGRATED CIRCUITS)** |
| IC3001 | SID614042SE97 | IC HD614042SE97 |
| IC3002 | SIBA6238A++++ | IC BA6238A |
| IC3003 | SILA6324+++++ | IC LA6324 |
| or | SIUPC324C++++ | IC UPC324C |

| Location | Part No. | Description |
|---|---|---|
|  |  | **(TRANSISTORS)** |
| Q3001 | STC536+E++++B | TR 2SC536 E |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| or | STC536+F++++B | TR 2SC536 F |
| Q3002 | STC536+E++++B | TR 2SC536 E |
|  |  | **(RESISTORS)** |
| R3001 | 401 012 9241 | CARBON 1M JA 1/4 |
| R3002 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3003 | 401 012 4444 | CARBON 100 JA 1/4 |
| R3004 | 401 014 6030 | CARBON 150K JA 1/4 |
| R3005 | 401 018 5732 | CARBON 330K JA 1/4 |
| R3008 | 401 012 9241 | CARBON 1M JA 1/4 |
| R3009 | 401 017 2732 | CARBON 27K JA 1/4 |
| R3010 | 401 019 3935 | CARBON 390K JA 1/4 |
| R3011 | 401 016 3730 | CARBON 2.2K JA 1/4 |
| R3012 | 401 014 5142 | CARBON 15K JA 1/4 |
| R3013 | 401 016 4737 | CARBON 22K JA 1/4 |
| R3014 | 401 016 5734 | CARBON 220K JA 1/4 |
| R3015 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3016 | 401 016 5734 | CARBON 220K JA 1/4 |
| R3017 | 401 016 5734 | CARBON 220K JA 1/4 |
| R3018 | 401 018 4844 | CARBON 33K JA 1/4 |
| R3019 | 401 018 4844 | CARBON 33K JA 1/4 |
| R3020 | 401 022 4045 | CARBON 68K JA 1/4 |
| R3021 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3022 | 401 022 3048 | CARBON 6.8K JA 1/4 |
| R3023 | 401 013 7236 | CARBON 120K JA 1/4 |
| R3024 | 401 017 2732 | CARBON 27K JA 1/4 |
| R3025 | 401 017 2732 | CARBON 27K JA 1/4 |
| R3026 | 401 014 4036 | CARBON 1.5K JA 1/4 |
| R3027 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3028 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3029 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3030 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3031 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3032 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3033 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3034 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3035 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3036 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3037 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3038 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3039 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3040 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3041 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3042 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3043 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3044 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3045 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3046 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3047 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3048 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3049 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3050 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3051 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3052 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3053 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3054 | 401 018 2731 | CARBON 330 JA 1/4 |
| R3055 | 401 018 2731 | CARBON 330 JA 1/4 |
| R3056 | 401 018 2731 | CARBON 330 JA 1/4 |
| R3057 | 401 018 2731 | CARBON 330 JA 1/4 |
| R3058 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3059 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3060 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3061 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3062 | 401 021 1847 | CARBON 560 JA 1/4 |
| R3063 | 401 021 1847 | CARBON 560 JA 1/4 |
| R3064 | 401 021 1847 | CARBON 560 JA 1/4 |
| R3065 | 401 018 2731 | CARBON 330 JA 1/4 |
| R3066 | 401 018 2731 | CARBON 330 JA 1/4 |
| R3067 | 401 012 5649 | CARBON 1K JA 1/4 |

| Location | Part No. | Description |
|---|---|---|
| R3068 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3069 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3070 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3071 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3072 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3073 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3074 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3075 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3076 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3077 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3079 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3080 | 401 014 5142 | CARBON 15K JA 1/4 |
| R3081 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3082 | 401 012 8036 | CARBON 100K JA 1/4 |
| R3084 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3086 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3087 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3100 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3101 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3102 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3103 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3104 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3105 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3106 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3107 | 401 012 6933 | CARBON 10K JA 1/4 |
| R3108 | 401 012 5649 | CARBON 1K JA 1/4 |
| R3151 | 401 061 0006 | OXIDE-MT 3.3 JA 1 |
| | | **(MISCELLANEOUS)** |
| X3001 | 4-266V-01100 | CERAMIC RESONATOR |

## SY-1 BOARD (POWER SUPPLY)
## NO.143-0-233V-05904

| Location | Part No. | Description |
|---|---|---|
| | 143-2-368T-10500 | HEAT SINK |
| | 143-2-383T-03100 | FUSE HOLDER |
| | | **(CAPACITORS)** |
| C5001 | CE+35338MVHAS | ELECT 3300MF 35V M V HA |
| C5002 | CE+16228MVHAS | ELECT 2200MF 16V M V HA |
| C5003 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C5004 | CE+16476MRHAL | ELECT 47MF 16V M R HA |
| C5005 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C5006 | CE+16476MRHAL | ELECT 47MF 16V M R HA |
| C5007 | CE+50475MRHAL | ELECT 4.7MF 50V M R HA |
| C5009 | CE100107MY++S | ELECT 100MF 100V M Y |
| C5010 | CE100226MY++S | ELECT 22MF 100V M Y |
| C5011 | CE+25107MRHAL | ELECT 100MF 25V M R HA |
| C5012 | CE+35475MRHAL | ELECT 4.7MF 35V M R HA |
| C5013 | CE+35338MVHAS | ELECT 3300MF 35V M V HA |
| | | **(DIODES)** |
| D5001 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5002 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5003 | SDGZA220Y+++T | ZENER DIODE GZA22Y |
| D5004 | SDDS446+++++T | DIODE DS446 |
| D5005 | SDGZA091Z+++T | ZENER DIODE GZA9.1Z |
| D5006 | SDDS446+++++T | DIODE DS446 |
| D5007 | SDGZA300Z+++T | ZENER DIODE GZA30Z |
| D5008 | SDGZA043Y+++T | ZENER DIODE GZA4.3Y |
| D5010 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5011 | SDDS442+++++T | DIODE DS442 |
| | | **(INTEGRATED CIRCUIT)** |
| IC5001 | ⚠SISTK5482++++ | IC STK5482 |

| Location | Part No. | Description |
|---|---|---|
| | | **(TRANSISTORS)** |
| Q5001 | STC3070++++++ | TR 2SC3070 |
| Q5002 | STB985+S+++++ | TR 2SB985 S |
| or | STB985+T+++++ | TR 2SB985 T |
| Q5003 | STC536+E+++++ | TR 2SC536 E |
| or | STC536+F+++++ | TR 2SC536 F |
| Q5004 | STD415+Q+++++ | TR 2SD415 Q |
| or | STD600+F+++++ | TR 2SD600 F |
| Q5006 | STB631+F+++++ | TR 2SB631 F |
| or | STB549+Q+++++ | TR 2SB549 Q |
| | | **(RESISTORS)** |
| R5001 | 401 019 1961 | CARBON 3.9K JA 1/4 |
| R5002 | 401 021 8262 | CARBON 620 JA 1/4 |
| R5003 | 401 020 2073 | CARBON 4.7K JA 1/4 |
| R5004 | 401 021 8262 | CARBON 620 JA 1/4 |
| R5005 | 401 060 7303 | OXIDE-MT 270 JA 1W |
| or | 401 060 7402 | OXIDE-MT 270 JA 1W |
| R5006 | 401 020 2964 | CARBON 47K JA 1/4 |
| R5007 | 401 062 6007 | OXIDE-MT 560 JA 1W |
| or | 401 062 6106 | OXIDE-MT 560 JA 1W |
| R5008 | 401 023 2862 | CARBON 8.2K JA 1/4 |
| R5009 | 401 023 2862 | CARBON 8.2K JA 1/4 |
| R5010 | 401 067 0802 | OXIDE-MT 2.7K JA 2 |
| R5011 | 401 063 6303 | OXIDE-MT 820 JA 1W |
| or | 401 063 6402 | OXIDE-MT 820 JA 1 |
| R5012 | 401 011 2302 | CARBON 6.8K JA 1/2 |
| R5015 | 401 011 6102 | CARBON 8.2K JA 1/2 |
| R5016 | ⚠402 023 2106 | FUSIBLE RES 470 JA 1/4 |
| R5018 | 401 020 2964 | CARBON 47K JA 1/4 |
| R5022 | 401 014 2953 | CARBON 150 JA 1/4 |
| R5023 | 401 014 2953 | CARBON 150 JA 1/4 |
| | | **(MISCELLANEOUS)** |
| F5001 | ⚠ 4-234V-17612 | FUSE |

## SY-2 BOARD (SYSTEM CONTROL)
## NO.143-0-233V-17601(A)/143-0-233V-17626(B)

| Location | Part No. | Description |
|---|---|---|
| | 143-2-374T-14400 | BRACKET, POWER ON LED |
| | | **(COMPOSITE)** |
| B3201 | SRC144F++++++ | TR MD DTC144F |
| B3202 | SRA144F++++++ | TR MD DTA144F |
| | | **(DIODE)** |
| D3201 | SLSLP938B51RE | LED SLP938B-51 ...POWER ON |
| | | **(RESISTORS)** |
| R3212 | 401 024 7044 | CARBON 1K JA 1/6 |
| R3221 | 401 024 7044 | CARBON 1K JA 1/6 |
| | | **(SWITCHES)** |
| S3202 | 4-231V-72200 | EJECT |
| or | 4-231V-73000 | EJECT |
| S3203 | 4-231V-72200 | ON/STAND BY |
| or | 4-231V-73000 | ON/STAND BY |
| S3205 | 4-231V-29600 | COLOUR SYSTEM SELECTOR(A) |
| or | 4-231V-29700 | COLOUR SYSTEM SELECTOR(B) |
| | | **(VARIABLE RESISTORS)** |
| VR3201 | 4-222V-32200 | PICTURE |
| VR3202 | 4-222V-28700 | TRACKING |

## PW-1 BOARD (POWER SUPPLY)
**NO.143-0-233V-20971**

| Location | Part No. | Description |
|---|---|---|
|  | 143–2–383T–03100 | FUSE HOLDER |
|  |  | **(CAPACITOR)** |
| C5101 | ⚠ 4–223V–28900 | 0.0047MF/250V |
|  |  | **(DIODES)** |
| D5101 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5102 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5103 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5104 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5105 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5106 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5107 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5108 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
|  |  | **(MISCELLANEOUS)** |
| F5101 | ⚠ 4–234V–17606 | FUSE |
| F5102 | ⚠ 4–234V–17612 | FUSE |

## TN-1 BOARD (TUNER I.F.)
**NO.143-0-233V-08000(B)/143-0-233V-08023(A)**

| Location | Part No. | Description |
|---|---|---|
|  |  | **(COMPOSITE)** |
| B6001 | SRC3400++++++ | TR MD 2SC3400 |
| or | SRC124N++++++ | TR MD DTC124N |
| or | SRC124ES+++++ | TR MD DTC124ES |
| or | SRRN1203+++++ | TR MD RN1203 |
|  |  | **(CAPACITORS)** |
| C6001 | CC+50390JRRHL | CERAMIC 39PF 50V J R RH |
| C6002 | CC+50270JRRHL | CERAMIC 27PF 50V J R RH |
| C6003 | CC+50560JRRHL | CERAMIC 56PF 50V J R RH |
| C6004 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6005 | CB+16103NA+YG | BC CON 0.01MF 16V N A Y G |
| C6006 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6007 | CE+50474MRHAL | ELECT 0.47MF 50V M R HA |
| C6008 | CC+50180JRSLL | CERAMIC 18PF 50V J R SL |
| C6009 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6010 | CE+50225MRHAL | ELECT 2.2MF 50V M R HA |
| C6011 | CB+16103NA+YG | BC CON 0.01MF 16V N A Y G |
| C6012 | CE+16107MRHAL | ELECT 100MF 16V M R HA |
| C6013 | CC+50270JRRHL | CERAMIC 27PF 50V J R RH |
| C6014 | CE+50474MRHAL | ELECT 0.47MF 50V M R HA |
| C6015 | CC+50180JRCHL | CERAMIC 18PF 50V J R CH |
| C6016 | CC+50820JRLHL | CERAMIC 82PF 50V J R LH |
| C6018 | CC+50560JRRHL | CERAMIC 56PF 50V J R RH |
| C6020 | CC+50030CRCHL | CERAMIC 3PF 50V C R CH |
| C6021 | CC+50680JRRHL | CERAMIC 68PF 50V J R RH |
| C6022 | CC+50220JRRHL | CERAMIC 22PF 50V J R RH |
| C6024 | CC+50390JRSLL | CERAMIC 39PF 50V J R SL |
| C6025 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C6026 | CC+50102KRYBL | CERAMIC 0.001MF 50V K R Y |
| C6028 | CM+50223KR++L | MYLAR 0.022MF 50V K R |
| C6029 | CE+25475MRHAL | ELECT 4.7MF 25V M R HA |
| C6031 | CB+16103NA+YG | BC CON 0.01MF 16V N A Y G |
| C6032 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6033 | CE+16337MVHAS | ELECT 330MF 16V M V HA |
| C6034 | CE+25475MRHAL | ELECT 4.7MF 25V M R HA |
| C6035 | CF+50104JR++L | THIN FILM 0.1MF 50V J |
| C6036 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C6037 | CE+25475MRHAL | ELECT 4.7MF 25V M R HA |
| C6041 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6042 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6045 | CF+50224JR++L | THIN FILM 0.22MF 50V J |
| C6053 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6055 | CC+50150JRRHL | CERAMIC 15PF 50V J R RH |
| C6060 | CF+50104JR++L | THIN FILM 0.1MF 50V J |
|  |  | **(DIODES)** |
| D6001 | SDGZA091Y++++ | ZENER DIODE GZA9.1Y |
| or | SD05Z091Y++++ | ZENER DIODE 05Z9.1Y |
|  |  | **(INTEGRATED CIRCUITS)** |
| IC6001 | SIM51365SP+++ | IC M51365SP |
|  |  | **(COILS)** |
| L6001 | 4–253V–74329 | HF CHOKE 56UH |
| L6002 | 4–253V–74320 | HF CHOKE 10UH |
| L6004 | 4–253V–74335 | HF CHOKE 180UH |
| L6007 | 4–253V–74300 | HF CHOKE 0.22UH |
|  |  | **(TRANSISTORS)** |
| Q6001 | STC2216++++++ | TR 2SC2216 |
| Q6003 | STA608+E+++++ | TR 2SA608 E |
| or | STA608+F+++++ | TR 2SA608 F |
| Q6060 | SF2K68++A+K++ | FET 2SK68 A K |
|  |  | **(RESISTORS)** |
| R6001 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6002 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6003 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R6004 | 401 025 7142 | CARBON 22 JA 1/6 |
| R6005 | 401 025 7449 | CARBON 220 JA 1/6 |
| R6006 | 401 024 6740 | CARBON 100 JA 1/6 |
| R6007 | 401 027 9342 | CARBON 820K JA 1/6 |
| R6008 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R6010 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R6011 | 401 027 5542 | CARBON 6.8K JA 1/6 |
| R6012 | 401 027 3043 | CARBON 56K JA 1/6 |
| R6013 | 402 023 4506 | FUSIBLE RES 270 JA 1/2 |
| R6014 | 401 025 4240 | CARBON 1.8K JA 1/6 |
| R6015 | 401 026 3945 | CARBON 330 JA 1/6 |
| R6016 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R6017 | 401 027 0349 | CARBON 47K JA 1/6 |
| R6018 | 401 026 9343 | CARBON 47 JA 1/6 |
| R6019 | 401 027 8345 | CARBON 820 JA 1/6 |
| R6020 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6026 | 401 027 8642 | CARBON 8.2K JA 1/6 |
| R6027 | 401 026 3945 | CARBON 330 JA 1/6 |
| R6028 | 401 026 3945 | CARBON 330 JA 1/6 |
| R6029 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| R6030 | 401 026 0647 | CARBON 270 JA 1/6 |
| R6031 | 401 026 3945 | CARBON 330 JA 1/6 |
| R6032 | 401 026 1644 | CARBON 270K JA 1/6 |
| R6033 | 401 026 1644 | CARBON 270K JA 1/6 |
| R6034 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6035 | 401 026 3945 | CARBON 330 JA 1/6 |
| R6036 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6037 | 401 026 9640 | CARBON 470 JA 1/6 |
| R6038 | 401 027 5047 | CARBON 68 JA 1/6 |
| R6039 | 401 027 5542 | CARBON 6.8K JA 1/6 |
| R6040 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R6041 | 401 024 8041 | CARBON 1M JA 1/6 |
| R6046 | 401 026 4348 | CARBON 3.3K JA 1/6 |
| R6051 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6052 | 401 026 1040 | CARBON 2.7K JA 1/6 |
| R6053 | 401 025 0648 | CARBON 1.3K JA 1/6 |
| R6054 | 401 025 7845 | CARBON 2.2K JA 1/6 |
| R6055 | 401 025 1645 | CARBON 1.5K JA 1/6 |
| R6060 | 401 024 6740 | CARBON 100 JA 1/6 |
| R6061 | 401 026 1644 | CARBON 270K JA 1/6 |
| R6062 | 401 026 1644 | CARBON 270K JA 1/6 |
| R6063 | 401 024 8041 | CARBON 1M JA 1/6 |

| Location | Part No. | Description |
|---|---|---|
| R6090 | 401 027 2640 | CARBON 5.6K JA 1/6 |
| | | **(SEMI VARIABLE RESISTOR)** |
| SVR6001 | 4-222V-68906 | 1K OHM |
| | | **(TRANSFORMERS)** |
| T6002 | 4-256V-29700 | IFT |
| T6003 | 4-256V-29900 | IFT |
| T6004 | 4-256V-29800 | IFT |
| T6005 | 4-256V-30000 | IFT |
| T6006 | 4-256V-30000 | IFT |
| | | **(MISCELLANEOUS)** |
| X6001 | 4-953V-22300 | FILTER |
| X6002 | 4-953V-22200 | FILTER |
| X6003 | 4-953V-15500 | FILTER |
| X6005 | 4-953V-15700 | FILTER |

## TN-2 BOARD (TUNING CONTROL)
## NO.143-0-233V-17421

| Location | Part No. | Description |
|---|---|---|
| | | **(COMPOSITE)** |
| B6201 | 4-957V-10304 | R-PACK 10K OHMX4 |
| or | 4-956V-10304 | R-PACK 10K OHMX4 |
| | | **(CAPACITORS)** |
| C6201 | CC+50102KDYBS | CERAMIC 0.001MF 50V K D Y |
| C6202 | CE+50105MVAKS | ELECT 1MF 50V M V AK |
| C6203 | CE+16107MVHAS | ELECT 100MF 16V M V HA |
| C6204 | CE+50224MVAKS | ELECT 0.22MF 50V M V AK |
| C6205 | CE+50474MVAKS | ELECT 0.47MF 50V M V AK |
| C6206 | CC+50331KDYBS | CERAMIC 330PF 50V K D YB |
| C6207 | CC+50102KDYBS | CERAMIC 0.001MF 50V K D Y |
| C6208 | CC+50181KDYBS | CERAMIC 180PF 50V K D YB |
| C6209 | CM+50152JM++S | MYLAR 0.0015MF 50V J M |
| C6210 | CF+50104JM++S | THIN FILM 0.1MF 50V J |
| C6211 | CF+50334JM++S | THIN FILM 0.33MF 50V J |
| C6212 | CC+50220JASLG | CERAMIC 22PF 50V J A SL G |
| C6213 | CC+50220JASLG | CERAMIC 22PF 50V J A SL G |
| C6214 | CC+50050CDSLS | CERAMIC 5PF 50V C D SL |
| C6216 | CE+10336MVAKS | ELECT 33MF 10V M V AK |
| C6217 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6218 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6219 | CE+50106MVAKS | ELECT 10MF 50V M V AK |
| C6220 | CE+16107MVHAS | ELECT 100MF 16V M V HA |
| C6221 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6222 | CE+50226MVAKS | ELECT 22MF 50V M V AK |
| C6223 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6224 | CE+10336MVAKS | ELECT 33MF 10V M V AK |
| C6225 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6226 | CD5R5473ZV++S | EDL CON 0.047F 5.5V Z V |
| C6227 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6228 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6229 | CC+50101KAYBG | CERAMIC 100PF 50V K A YB |
| C6230 | CC+50101KAYBG | CERAMIC 100PF 50V K A YB |
| C6231 | CC+50101KAYBG | CERAMIC 100PF 50V K A YB |
| | | **(DIODES)** |
| D6201 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6202 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6205 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6206 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6207 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| | | **(INTEGRATED CIRCUITS)** |
| IC6201 | SIM50754645SP | IC M50754645SP |
| IC6202 | SIM58653P++++ | IC M58653P |
| IC6203 | SILA7212+++++ | IC LA7212 |
| IC6204 | SILA7910+++++ | IC LA7910 |
| IC6205 | SIMN1280L++++ | IC MN1280L |
| IC6206 | SIL5631++++++ | IC L5631 |
| | | **(TRANSISTORS)** |
| Q6203 | STC2021R+++++ | TR 2SC2021 R |
| or | STC2021Q+++++ | TR 2SC2021 Q |
| Q6204 | STC2021R+++++ | TR 2SC2021 R |
| or | STC2021Q+++++ | TR 2SC2021 Q |
| Q6205 | STB985+S+++++ | TR 2SB985 S |
| or | STB985+T+++++ | TR 2SB985 T |
| Q6207 | STC383TM+++++ | TR 2SC383TM |
| | | **(RESISTORS)** |
| R6201 | 401 024 6740 | CARBON 100 JA 1/6 |
| R6202 | 401 025 1942 | CARBON 15K JA 1/6 |
| R6203 | 401 025 1942 | CARBON 15K JA 1/6 |
| R6204 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6205 | 401 025 7449 | CARBON 220 JA 1/6 |
| R6206 | 401 025 8743 | CARBON 220K JA 1/6 |
| R6207 | 401 027 7427 | CARBON 75K JA 1/6 |
| R6208 | 401 025 1942 | CARBON 15K JA 1/6 |
| R6209 | 401 024 9345 | CARBON 1.2K JA 1/6 |
| R6210 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6211 | 401 025 4646 | CARBON 18K JA 1/6 |
| R6212 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6213 | 401 017 0867 | CARBON 270 JA 1/4 |
| R6214 | 401 017 0867 | CARBON 270 JA 1/4 |
| R6215 | 401 027 0349 | CARBON 47K JA 1/6 |
| R6219 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R6223 | 401 026 7042 | CARBON 3.9K JA 1/6 |
| R6224 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6225 | 401 026 4645 | CARBON 33K JA 1/6 |
| R6226 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6227 | 401 027 0349 | CARBON 47K JA 1/6 |
| R6228 | 401 025 8248 | CARBON 22K JA 1/6 |
| R6229 | 401 026 9947 | CARBON 4.7K JA 1/6 |
| R6230 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6231 | 401 024 6740 | CARBON 100 JA 1/6 |
| R6232 | 401 024 8041 | CARBON 1M JA 1/6 |
| R6233 | 401 012 9904 | CARBON 10M JA 1/4 |
| R6234 | 401 026 4942 | CARBON 330K JA 1/6 |
| R6235 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6236 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6237 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6238 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6239 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6240 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6241 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6242 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6243 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6244 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6245 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6246 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6247 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6248 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6249 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6250 | 401 024 7044 | CARBON 1K JA 1/6 |
| R6251 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6252 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6253 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6254 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6255 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6256 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6257 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6258 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6259 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6260 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6261 | 401 024 7450 | CARBON 10K JA 1/6 |

| Location | Part No. | Description |
|---|---|---|
| R6262 | 401 024 7450 | CARBON 10K JA 1/6 |
| R6263 | 401 027 0349 | CARBON 47K JA 1/6 |
| R6264 | 401 025 8248 | CARBON 22K JA 1/6 |
| | | **(SWITCHES)** |
| S6201 | 4-231V-82500 | PRESET |
| S6202 | 4-231V-82500 | SEARCH/FINE TUNING(DOWN) |
| S6203 | 4-231V-82500 | SEARCH/FINE TUNING(UP) |
| S6204 | 4-231V-82500 | AFT ON |
| S6205 | 4-231V-82500 | BAND |
| S6206 | 4-231V-82500 | MEMORY |
| | | **(MISCELLANEOUS)** |
| CT6201 | 4-224V-12700 | TRIMMER |
| X6201 | 4-225V-23900 | CRYSTAL |
| or | 4-225V-24100 | CRYSTAL |
| X6202 | 4-225V-23100 | CRYSTAL |
| or | 4-225V-24200 | CRYSTAL |
| X6203 | 4-953V-07500 | FILTER |

## TN-3 BOARD (CHANNEL SELECT, TIMER & OPERATION)

## NO.143-0-233V-17521

| Location | Part No. | Description |
|---|---|---|
| | 143-2-374T-13401 | BRACKET, FUNCTION LEDS |
| | 143-2-386T-02400 | BRACKET, DIGITAL DISPLAY |
| | 143-2-210T-06000 | BRACKET, PHOTO SENSOR |
| | | **(CAPACITORS)** |
| C6301 | CE+50105MVAKS | ELECT 1MF 50V M V AK |
| C6302 | CE+50335MVAKS | ELECT 3.3MF 50V M V AK |
| C6303 | CC+50471JDSLS | CERAMIC 470PF 50V J D SL |
| C6304 | CE+16106MVAKS | ELECT 10MF 16V M V AK |
| | | **(DIODES)** |
| D6301 | SDGMA01+++++T | DIODE GMA01 |
| OR | SD1SS133++++T | DIODE 1SS133 |
| D6302 | SDGMA01+++++T | DIODE GMA01 |
| OR | SD1SS133++++T | DIODE 1SS133 |
| D6303 | SDGMA01+++++T | DIODE GMA01 |
| OR | SD1SS133++++T | DIODE 1SS133 |
| D6304 | SDGMA01+++++T | DIODE GMA01 |
| OR | SD1SS133++++T | DIODE 1SS133 |
| D6305 | SDGMA01+++++T | DIODE GMA01 |
| OR | SD1SS133++++T | DIODE 1SS133 |
| D6307 | SLSLP938B51RE | LED SLP938B-51 ...REC |
| D6308 | SLBG5628S++GR | LED BG5628S ...PLAY |
| D6309 | SLSLP938B51RE | LED SLP938B-51 ...PAUSE/STILL |
| D6310 | SLBG5628S++GR | LED BG5628S ...FF |
| D6311 | SLBG5628S++GR | LED BG5628S ...REW |
| D6312 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6313 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6314 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6315 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6316 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6317 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6318 | SPPN323BHT+++ | PHOTO SENSOR PN323B HT |
| | | **(INTEGRATED CIRCUIT)** |
| IC6301 | SICX20106A+++ | IC CX20106A |
| | | **(RESISTORS)** |
| R6301 | 401 024 6443 | CARBON 10 JA 1/6 |
| R6302 | 401 025 8614 | CARBON 220K GA 1/6 |
| R6303 | 401 025 8248 | CARBON 22K JA 1/6 |
| | | **(SWITCHES)** |
| S6301 | 4-231V-73000 | CH(UP) |
| or | 4-231V-72200 | CH(UP) |
| S6302 | 4-231V-82500 | RECALL |
| S6303 | 4-231V-73000 | QSR START |
| or | 4-231V-72200 | QSR START |
| S6304 | 4-231V-82500 | CLOCK SET |
| S6305 | 4-231V-82500 | UP |
| S6306 | 4-231V-82500 | VPS OFF |
| S6307 | 4-231V-73000 | CH(DOWN) |
| or | 4-231V-72200 | CH(DOWN) |
| S6308 | 4-231V-82500 | CANCEL |
| S6309 | 4-231V-73000 | QSR LENGTH |
| or | 4-231V-72200 | QSR LENGTH |
| S6310 | 4-231V-82500 | PRG SET |
| S6311 | 4-231V-82500 | DOWN |
| S6312 | 4-231V-73000 | COUNTER RESET |
| or | 4-231V-72200 | COUNTER RESET |
| S6313 | 4-231V-73000 | COUNTER MEMORY |
| or | 4-231V-72200 | COUNTER MEMORY |
| S6314 | 4-231V-82500 | ENTER |
| S6315 | 4-231V-82500 | DIMMER |
| S6316 | 4-231V-73000 | REW |
| or | 4-231V-72200 | REW |
| S6317 | 4-231V-73000 | STOP |
| or | 4-231V-72200 | STOP |
| S6318 | 4-231V-73000 | PLAY |
| or | 4-231V-72200 | PLAY |
| S6319 | 4-231V-73000 | REC |
| or | 4-231V-72200 | REC |
| S6320 | 4-231V-73000 | FRAME ADV |
| or | 4-231V-72200 | FRAME ADV |
| S6321 | 4-231V-73000 | FF |
| or | 4-231V-72200 | FF |
| S6322 | 4-231V-73000 | PAUSE/STILL |
| or | 4-231V-72200 | PAUSE/STILL |
| S6324 | 4-231V-82500 | ALL CLEAR |
| S6325 | 4-231V-29700 | TIMER |
| | | **(MISCELLANEOUS)** |
| A6301 | 4-985V-04400 | DIGITAL DISPLAY |

## TM-3 BOARD (VPS)

## NO.143-0-233V-09800

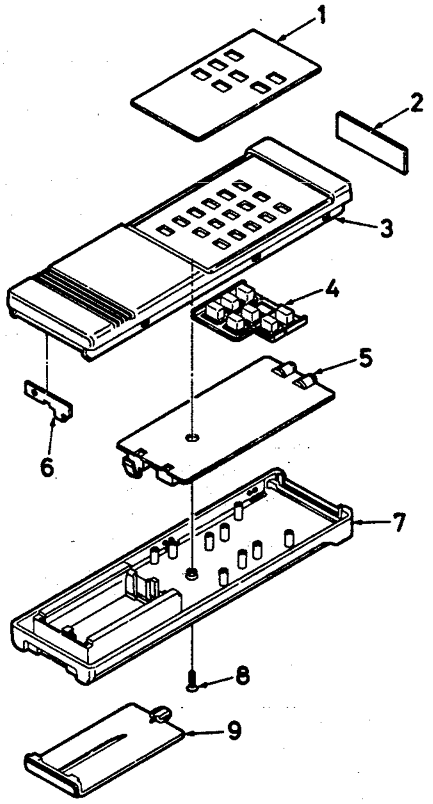
| Location | Part No. | Description |
|---|---|---|
| | 143-2-377T-21000 | BRACKET, CIRCUIT BOARD |

## REMOTE CONTROL UNIT
NO.143-9-4100-64480

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143-2-143T-74180 | PLATE OPERATION |
| 2 | 143-2-132T-11080 | WINDOW |
| 3 | 143-2-111T-09580 | CASE, TOP |
| 4 | 143-2-161T-72780 | BUTTON, RUBBER |
| 5 | 143-0-233V-26580 | RM-1 BOARD ASSEMBLY |
| 6 | 143-2-382T-02900 | TERMINAL, BATTERY |
| 7 | 143-2-125T-09180 | CASE, BOTTOM |
| 8 | BJS2S2R6+8+ZK | S T FLAT H 2.6X8ZK |
| 9 | 143-2-128T-03480 | LID, BATTERY |

## RM-1 BOARD (REMOTE CONTROL UNIT)
NO.143-0-233V-26580

| Location | Part No. | Description |
|---|---|---|
| | 143-2-382T-03000 | TERMINAL, POSITIVE |
| | 143-2-382T-03100 | TERMINAL, NEGATIVE |
| | | **(CAPACITORS)** |
| C1 | CC+50101JDSLS | CERAMIC 100PF 50V J |
| C2 | CC+50101JDSLS | CERAMIC 100PF 50V J |
| C3 | CE6R3476MVHAS | ELECT 47MF 6.3V M |
| | | **(DIODES)** |
| D1 | SLSE303A+++NO | LED SE303A |
| or | SLSLR932A++NO | LED SLR932A |
| D2 | SD1SS133+++++ | DIODE 1SS133 |
| or | SD1S2473+++++ | DIODE 1S2473 |
| D3 | SD1SS133+++++ | DIODE 1SS133 |
| or | SD1S2473+++++ | DIODE 1S2473 |
| D4 | SD1SS133+++++ | DIODE 1SS133 |
| or | SD1S2473+++++ | DIODE 1S2473 |
| | | **(INTEGRATED CIRCUIT)** |
| IC1 | SIUPD1913C+++ | IC UPD1913C |
| | | **(RESISTORS)** |
| R1 | 401 024 6037 | CARBON 1.5 JA 1/6 |
| R2 | 401 024 6740 | CARBON 100 JA 1/6 |
| | | **(MISCELLANEOUS)** |
| X1 | 4-266V-01600 | RESONATOR, 455K HZ |
| or | 4-266V-01700 | RESONATOR, 455K HZ |



# CIRCUIT DIAGRAMS & PRINTED CIRCUIT BOARDS

# VHR-2300EX

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PA2P/EX-II, EX 67H

**NOTES:**

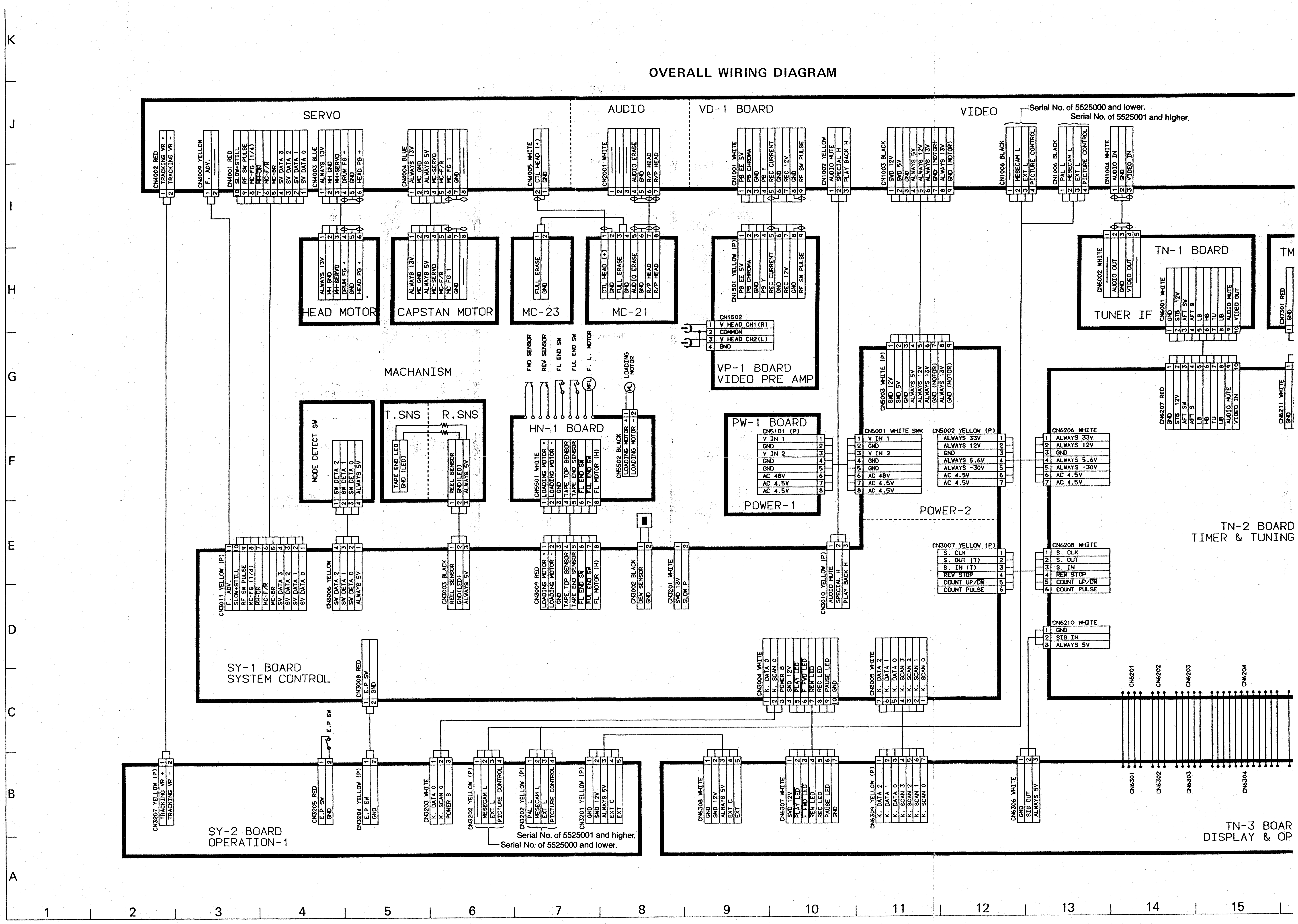
1. All resistance values in "OHMS" unless otherwise noted. (K=1,000 M=1,000,000)
2. All capacitance values in "$\mu$fd" unless otherwise noted. p=pico farad
3. All inductance values in "mH" unless otherwise noted. $\mu$=micro henry
4. Marks indicated in each connector indicate the following color of wire.

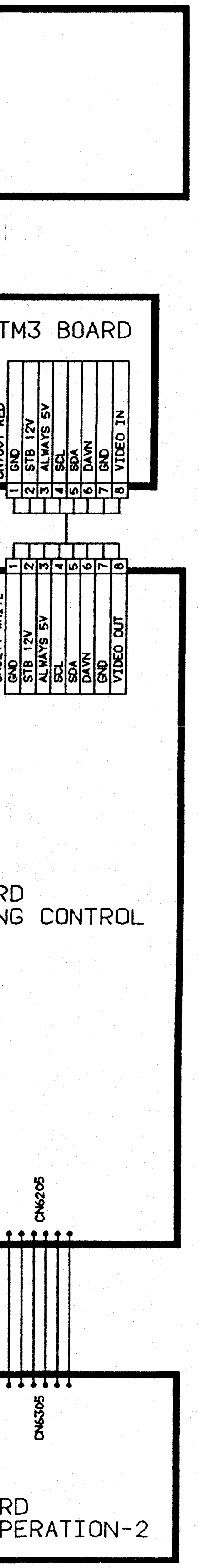
B : Black
R : Red
W : White
P : Pink
V : Violet
Y : Yellow
G : Gray
LB : Light Blue
BR : Brown
GR : Green
BL : Blue
OR : Orange

## PRODUCT SAFETY NOTICE

THE COMPONENTS DESIGNATED BY A SYMBOL (⚠) IN THIS SCHEMATIC DIAGRAM DESIGNATES COMPONENTS WHOSE VALUE ARE OF SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. SHOULD ANY COMPONENT DESIGNATED BY A SYMBOL NEED TO BE REPLACED, USE ONLY THE PART DESIGNATED IN THE PARTS LIST. DO NOT DEVIATE FROM THE RESISTANCE, WATTAGE AND VOLTAGE RATINGS SHOWN.

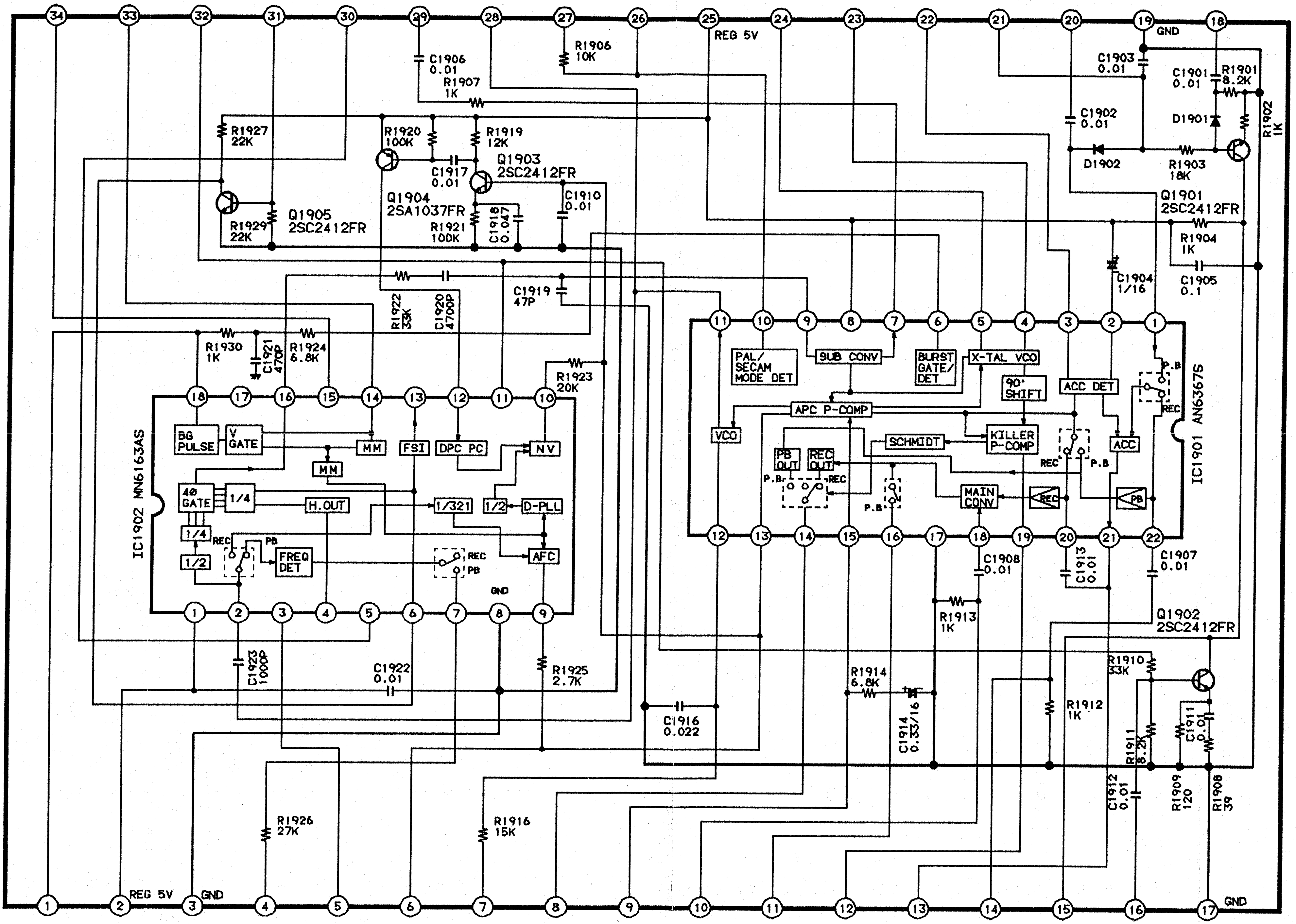
# OVERALL WIRING DIAGRAM


SERVO
AUDIO
VD-1 BOARD
VIDEO
Serial No. of 5525000 and lower.
Serial No. of 5525001 and higher.
CN4002 RED
TRACKING VR +
TRACKING VR -
CN4009 YELLOW
F. ADV.
CN4001 RED
SLOW+STILL
RF SW PULSE
MC-FG (1/4)
MH-ON
MC-F/R
MC-BR
SV DATA 3
SV DATA 2
SV DATA 1
SV DATA 0
CN4003 BLUE
ALWAYS 13V
MH GND
MH-SERVO
DRUM FG +
GND
HEAD PG +
CN4004 BLUE
ALWAYS 13V
MC GND
ALWAYS 5V
MC-SERVO
MC-F/R
MC FG I
GND
CN4005 WHITE
CTL HEAD (+)
GND
CN2001 WHITE
AUDIO ERASE
GND
R/P HEAD
R/P HEAD
CN1001 WHITE
PB EE 5V
PB CHROMA
GND
PB Y
REC CURRENT
REC 12V
GND
RF SW PULSE
CN1002 YELLOW
AUDIO MUTE
SPECIAL H
PLAY BACK H
CN1003 BLACK
SWD 12V
SWD 5V
GND
ALWAYS 5V
ALWAYS 12V
ALWAYS 13V
GND (MOTOR)
ALWAYS 13V
GND (MOTOR)
CN1006 BLACK
MESECAM L
EXT L
PICTURE CONTROL
CN1006 BLACK
PAL L
MESECAM L
EXT L
PICTURE CONTROL
CN1004 WHITE
AUDIO IN
GND
VIDEO IN
HEAD MOTOR
CAPSTAN MOTOR
FULL ERASE
GND
MC-23
CTL HEAD (+)
GND
FULL ERASE
GND
AUDIO ERASE
GND
R/P HEAD
R/P HEAD
MC-21
CN1501 YELLOW (P)
CN1502
V HEAD CH1(R)
COMMON
V HEAD CH2(L)
GND
VP-1 BOARD
VIDEO PRE AMP
CN6002 WHITE
AUDIO OUT
GND
VIDEO OUT
TN-1 BOARD
TUNER IF
CN6001 WHITE
GND
STB 12V
AFT SW
AFT S
LB
HB
TU
UB
AUDIO MUTE
VIDEO OUT
CN7301 RED
TM
MACHANISM
FWD SENSOR
REW SENSOR
FL END SW
FUL END SW
F. L. MOTOR
LOADING MOTOR
MODE DETECT SW
SW DETA 2
SW DETA 1
SW DETA 0
ALWAYS 5V
T.SNS
R.SNS
TAPE END LED
GND (LED)
REEL SENSOR
GND(LED)
ALWAYS 5V
HN-1 BOARD
CN5501 WHITE
LOADING MOTOR +
LOADING MOTOR -
GND
TAPE TOP SENSOR
TAPE END SENSOR
FL END SW
FUL END SW
FL MOTOR (H)
CN5502 BLACK
LOADING MOTOR +
LOADING MOTOR -
PW-1 BOARD
CN5101 (P)
V IN 1
GND
V IN 2
GND
GND
AC 48V
AC 4.5V
AC 4.5V
POWER-1
CN5001 WHITE SMK
V IN 1
GND
V IN 2
GND
GND
AC 48V
AC 4.5V
AC 4.5V
CN5002 YELLOW (P)
ALWAYS 33V
ALWAYS 12V
GND
ALWAYS 5.6V
ALWAYS -30V
AC 4.5V
AC 4.5V
CN5003 WHITE (P)
SWD 12V
SWD 5V
GND
ALWAYS 5V
ALWAYS 12V
ALWAYS 13V
GND (MOTOR)
ALWAYS 13V
GND (MOTOR)
POWER-2
CN6207 RED
GND
STB 12V
AFT SW
AFT S
LB
HB
TU
UB
AUDIO MUTE
VIDEO IN
CN6211 WHITE
GND
CN6206 WHITE
ALWAYS 33V
ALWAYS 12V
GND
ALWAYS 5.6V
ALWAYS -30V
AC 4.5V
AC 4.5V
TN-2 BOARD
TIMER & TUNING
CN3011 YELLOW (P)
F. ADV.
SLOW+STILL
RF SW PULSE
MC-FG (1/4)
MH-ON
MC-F/R
MC-BR
SV DATA 3
SV DATA 2
SV DATA 1
SV DATA 0
CN3006 YELLOW
SW DATA 2
SW DETA 1
SW DETA 0
ALWAYS 5V
CN3003 BLACK
REEL SENSOR
GND(LED)
ALWAYS 5V
CN3009 RED
LOADING MOTOR +
LOADING MOTOR -
GND
TAPE TOP SENSOR
TAPE END SENSOR
FL END SW
FUL END SW
FL MOTOR (H)
CN3002 BLACK
DEW SENSOR
GND
CN3201 WHITE
SWD 13V
SLOW P
CN3010 YELLOW (P)
AUDIO MUTE
SPECIAL H
PLAY BACK H
CN3007 YELLOW (P)
S. CLK
S. OUT (T)
S. IN (T)
REW STOP
COUNT UP/DW
COUNT PULSE
CN6208 WHITE
S. CLK
S. OUT
S. IN
REW STOP
COUNT UP/DW
COUNT PULSE
CN6210 WHITE
GND
SIG IN
ALWAYS 5V
SY-1 BOARD
SYSTEM CONTROL
CN3008 RED
E.P SW
GND
CN3004 WHITE
K. DATA 0
K. SCAN 0
POWER B
SWD 12V
PLAY LED
F FWD LED
REW LED
REC LED
PAUSE LED
GND
CN3005 WHITE
K. DATA 2
K. DATA 1
K. DATA 0
K. SCAN 3
K. SCAN 2
K. SCAN 1
K. SCAN 0
CN6201
CN6202
CN6203
CN6204
E.P SW
CN3207 YELLOW (P)
TRACKING VR +
TRACKING VR -
CN3205 RED
E.P SW
GND
CN3204 YELLOW (P)
E.P SW
GND
CN3203 WHITE
K. DATA 0
K. SCAN 0
POWER B
CN3202 YELLOW (P)
MESECAM L
EXT L
PICTURE CONTROL
CN3202 YELLOW (P)
PAL L
MESECAM L
EXT L
PICTURE CONTROL
CN3201 YELLOW (P)
GND
SWD 12V
ALWAYS 5V
EXT C
EXT
Serial No. of 5525001 and higher.
Serial No. of 5525000 and lower.
SY-2 BOARD
OPERATION-1
CN6308 WHITE
GND
SWD 12V
ALWAYS 5V
EXT C
EXT
CN6307 WHITE
SWD 12V
PLAY LED
F FWD LED
REW LED
REC LED
PAUSE LED
GND
CN6309 YELLOW (P)
K. DATA 2
K. DATA 1
K. DATA 0
K. SCAN 3
K. SCAN 2
K. SCAN 1
K. SCAN 0
CN6306 WHITE
GND
SIG OUT
ALWAYS 5V
CN6301
CN6302
CN6303
CN6304
TN-3 BOAR
DISPLAY & OP
K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15



TM3 BOARD
1 GND
2 STB 12V
3 ALWAYS 5V
4 SCL
5 SDA
6 DAVN
7 GND
8 VIDEO IN
1 GND
2 STB 12V
3 ALWAYS 5V
4 SCL
5 SDA
6 DAVN
7 GND
8 VIDEO OUT
RD
NG CONTROL
CN6205
CN6305
RD
PERATION-2

# HIC OF VIDEO CIRCUIT DIAGRAM



34
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26
25
REG 5V
24
23
22
21
20
19
GND
18
C1906
0.01
R1907
1K
R1906
10K
C1903
0.01
C1901
0.01
R1901
8.2K
D1901
R1902
1K
C1902
0.01
D1902
R1903
18K
Q1901
2SC2412FR
R1904
1K
C1905
0.1
C1904
1/16
R1927
22K
R1929
22K
Q1905
2SC2412FR
R1920
100K
R1919
12K
C1917
0.01
Q1903
2SC2412FR
Q1904
2SA1037FR
R1921
100K
C1918
0.047
C1910
0.01
C1919
47P
R1922
33K
C1920
4700P
R1930
1K
C1921
470P
R1924
6.8K
R1923
20K
IC1902 MN6163AS
BG PULSE
V GATE
MM
MM
FSI
DPC PC
NV
40 GATE
1/4
H.OUT
1/321
1/2
D-PLL
1/4
REC
PB
1/2
FREQ DET
REC
PB
AFC
GND
C1923
1000P
C1922
0.01
R1925
2.7K
R1926
27K
R1916
15K
IC1901 AN6367S
PAL/ SECAM MODE DET
SUB CONV
BURST GATE/ DET
X-TAL VCO
90° SHIFT
ACC DET
P.B
REC
VCO
APC P-COMP
KILLER P-COMP
ACC
SCHMIDT
PB OUT
REC OUT
P.B
REC
P.B
REC
P.B
MAIN CONV
REC
PB
C1916
0.022
C1908
0.01
C1913
0.01
C1907
0.01
R1913
1K
R1914
6.8K
C1914
0.33/16
Q1902
2SC2412FR
R1910
33K
R1912
1K
R1911
8.2K
C1911
0.01
C1912
0.01
R1909
120
R1908
39
1
2
REG 5V
3
GND
4
5
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12
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14
15
16
17
GND

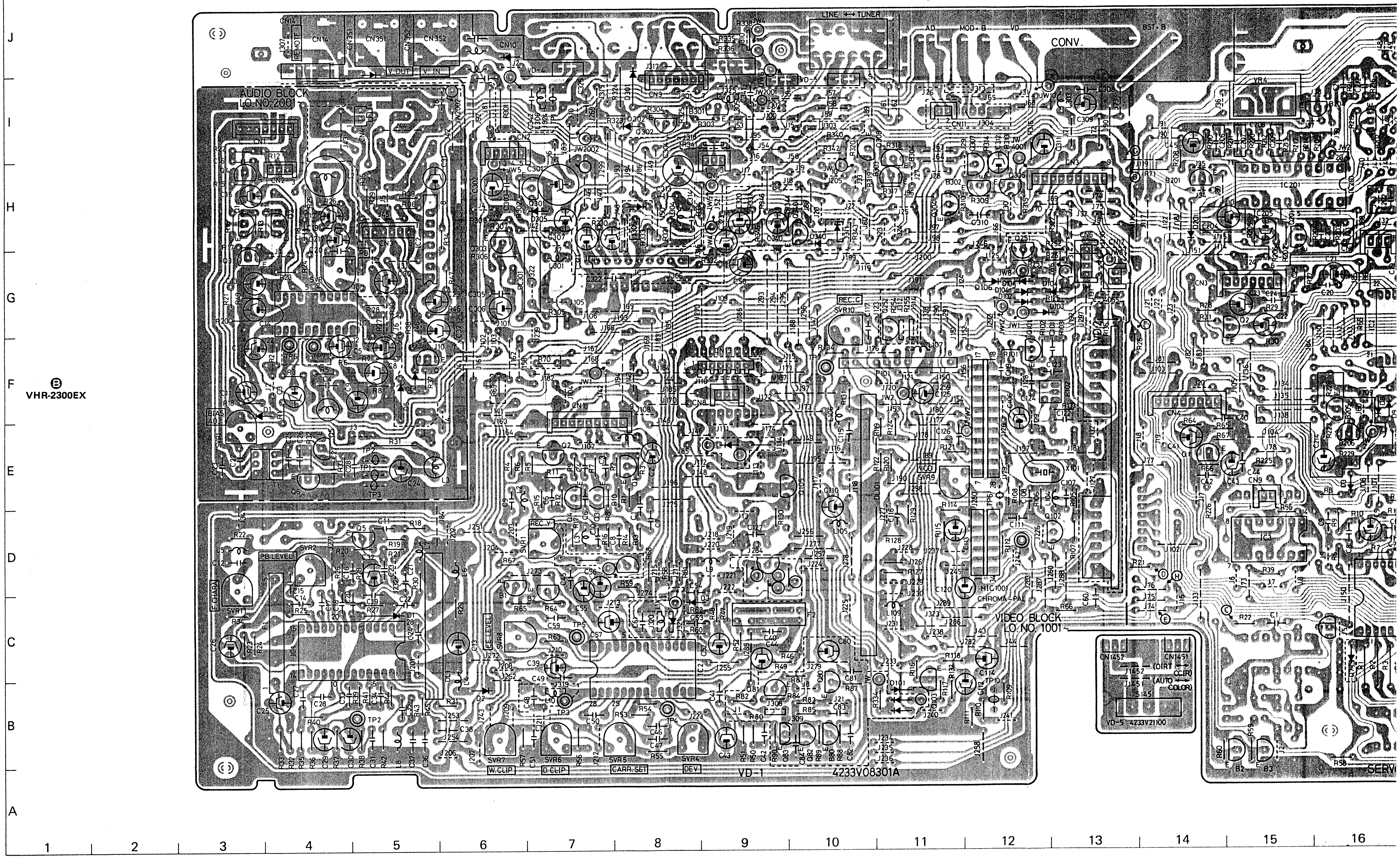
Ⓐ
VHR-2300EX

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

## P.C.B. VD-1, 5 VIDEO, AUDIO, SERVO (VD-1 143-0-233V08342)
## (VD-5 143-0-233V21100)

[Serial No. of 55250000 and lower.]

Ⓑ VHR-2300EX


K
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C
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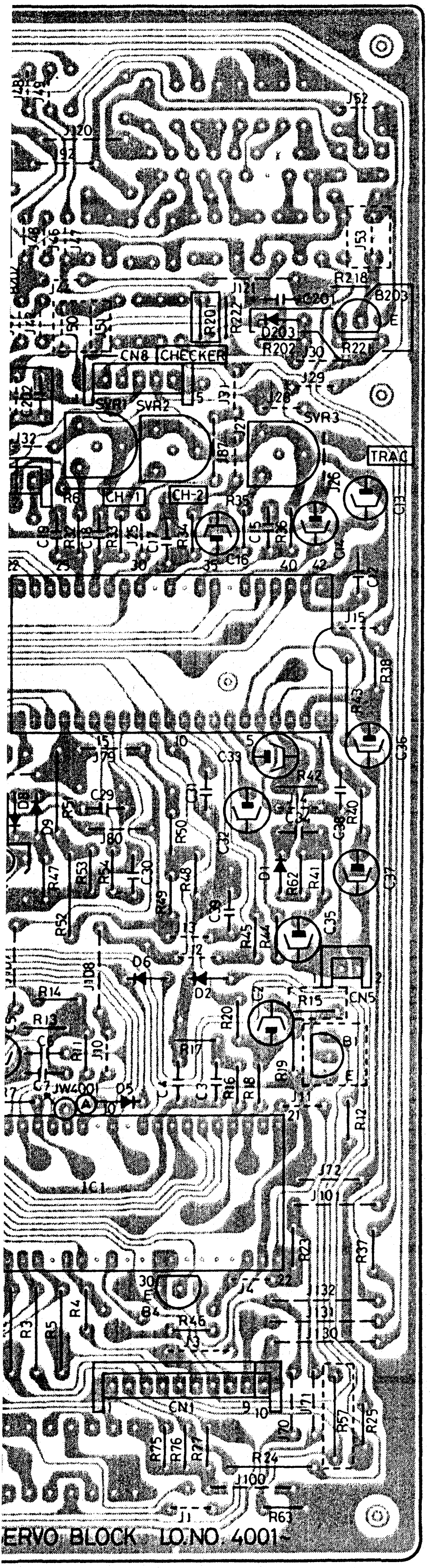
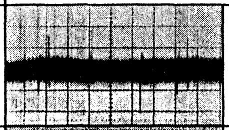
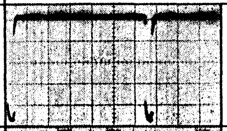
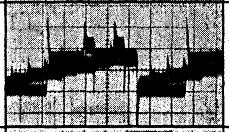
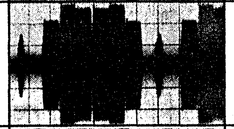
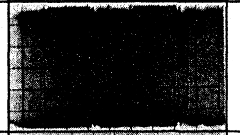
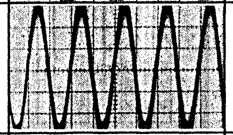
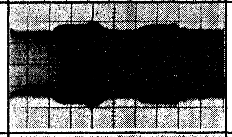
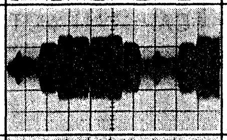
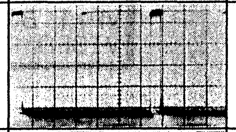
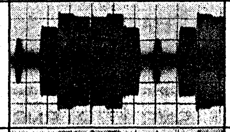
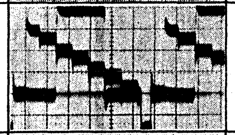
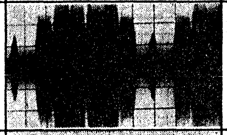
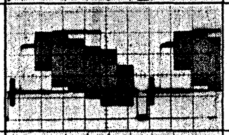
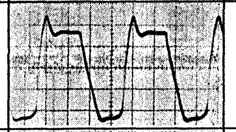
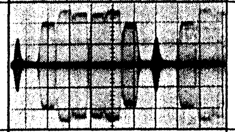
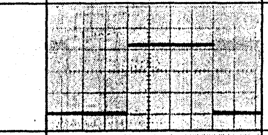
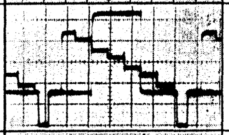
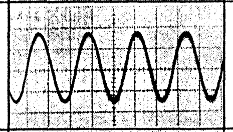
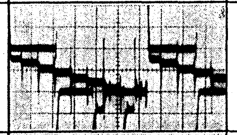
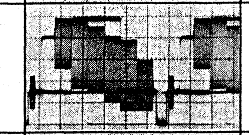
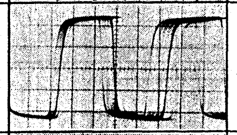
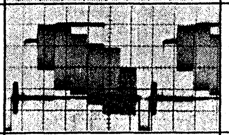
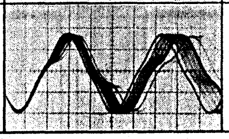
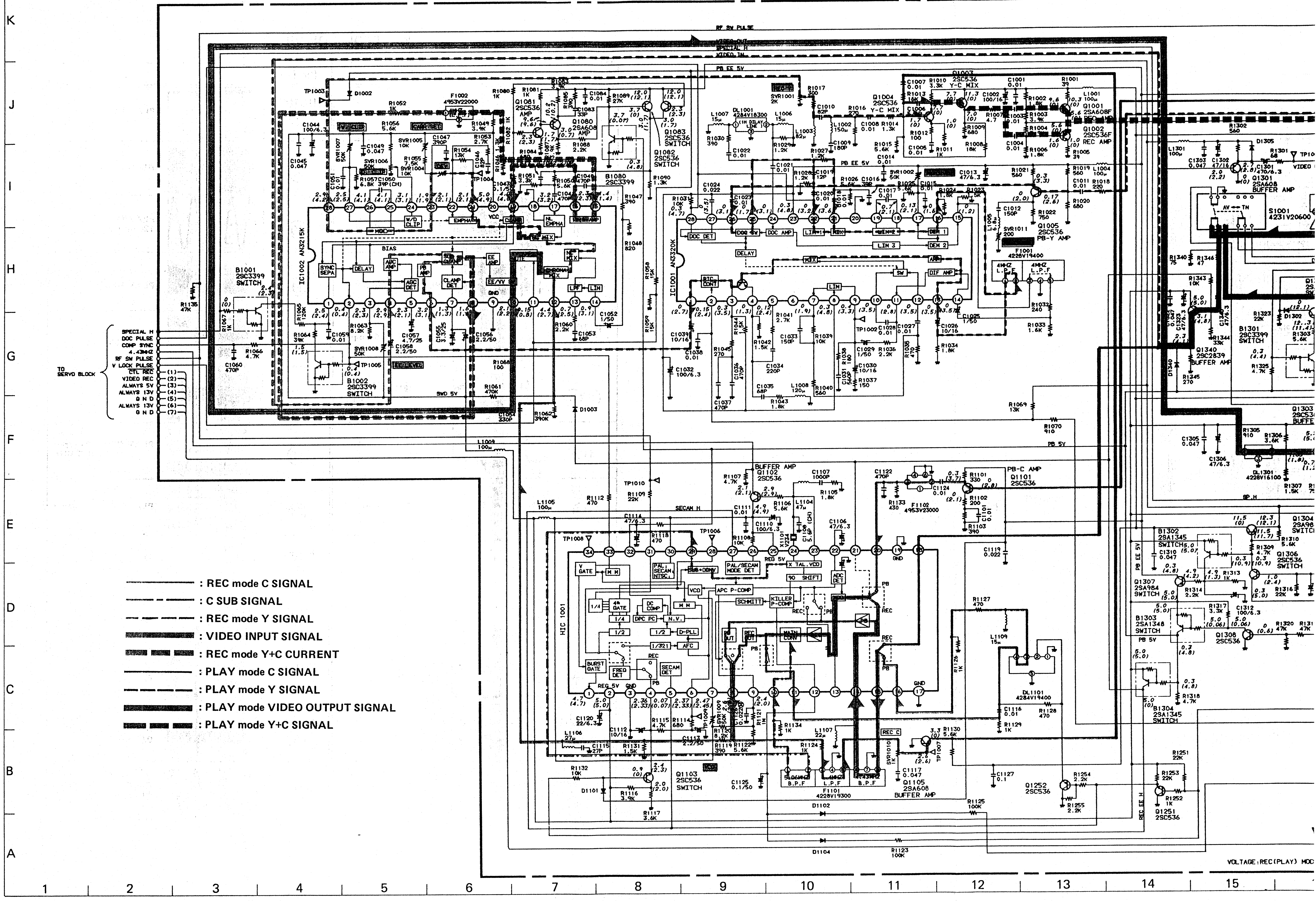
14
15
16
AUDIO BLOCK
LO.NO.2001
VIDEO BLOCK
LO.NO.1001
CONV.
LINE ←→ TUNER
AD
MOD-B
VD
BST-B
REMOTE
CN14
CN351
CN352
V.OUT
V.IN
CN10
VR4
IC201
IC205
CN3
CN4
CN9
IC3
BIAS ADJ
SVR1
PB LEVEL
SVR2
E.CHAR
EE LEVEL
SVR8
REC.Y
REC.C
SVR10
VCO
SVR9
HIC1001
CHROMA-PAL
X101
TP1
TP2
TP3
TP4
TP5
TP6
TP10
SVR7
W.CLIP
SVR6
D.CLIP
SVR5
CARR.SET
SVR4
DEV.
VD-1
4233V08301A
CN1452
CN1451
J1452
J1451
S1451
(OIRT CCIR)
(AUTO COLOR)
VD-5 4233V21100
SERVO


CN8
CHECKER
SVR1
SVR2
SVR3
TRAC
CH-1
CH-2
CN5
IC1
CN1
ERVO BLOCK LO.NO. 4001

## WAVEFORM OF VIDEO

| Pin No. | | | Pin No. | | |
|---|---|---|---|---|---|
| IC1001<br>⑨ |  | PLAY 12 mVp-p | HIC1001<br>① |  | PLAY/REC 5 Vp-p |
| ⑬ |  | PLAY 120 mVp-p | ⑧ |  | REC 1.05 Vp-p |
| ⑯ |  | PLAY 1.1 Vp-p | ⑩ |  | PLAY/REC<br>120 mVp-p |
| ㉖ |  | PLAY 750 mVp-p | ⑪ |  | PLAY 1.4Vp-p |
| IC1002<br>② |  | PLAY/REC 4.8 Vp-p | ⑭ |  | REC 220 mVp-p<br>PLAY 560 mVp-p |
| ⑥⑧ |  | PLAY ⑥ 220 mVp-p<br>⑧ 750 mVp-p | ⑳ |  | PLAY 120 mVp-p |
| ⑩ |  | REC/EE 2 Vp-p | ㉘ |  | PLAY/REC 950 mVp-p<br>5,015 MHz |
| ⑫ |  | PLAY 500 mVp-p | ㉛ |  | PLAY/REC 630 mVp-p |
| ⑲ |  | REC 1.05 Vp-p | Q1002<br>Ⓔ |  | PLAY/REC 600 mVp-p<br>4.43 MHz |
| ㉑ |  | REC 280 mVp-p | Q1340<br>Ⓔ |  | REC/EE 990 mVp-p |
| ㉘ |  | REC 920 mVp-p | TP1001 |  | PLAY/REC 1 Vp-p |
| CN1001<br>⑤ |  | REC 3.7 Vp-p | | | |

# P.C.B. VD-1, 5 VIDEO CIRCUIT DIAGRAM [Serial No. of 55250000 and lower.] (VD-1 143-0-233V08342) (VD-5 143-0-233V21100)



K
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14
15
RF SW PULSE
VIDEO OUT
SPECIAL H
VIDEO IN
PB EE 5V
TP1003
D1002
F1002
4953V22000
Q1081
2SC536
AMP
Q1080
2SA608
AMP
Q1083
2SC536
SWITCH
Q1082
2SC536
SWITCH
B1080
2SC3399
IC1002 AN3215K
SYNC SEPA
DELAY
ABC AMP
ABC DET
PB AMP
CLAMP DET
EE AMP
EE/VV
LPF
LIM
W/D CLIP
EMPHA
NL EMPHA
MIX
BIAS
GND
VCC
B1001
2SC3399
SWITCH
B1002
2SC3399
SWITCH
TP1005
TP1004
D1003
SPECIAL H
DOC PULSE
COMP SYNC
4.43MHZ
RF SW PULSE
V LOCK PULSE
TO SERVO BLOCK
CTL REC
VIDEO REC
ALWAYS 5V
ALWAYS 13V
GND
ALWAYS 13V
GND
SWD 5V
DL1001
4284V18300
1H DELAY LINE
SVR1001
2K
Q1004
2SC536
Y-C MIX
Q1003
2SC536
Y-C MIX
Q1001
2SA608F
Q1002
2SC536F
REC AMP
Q1005
2SC536
PB-Y AMP
F1001
4228V19400
4MHZ L.P.F
IC1001 AN3320K
DOC DET
DOC SW
DOC AMP
LIM
MIX
DEM
LIM 3
DEM 2
AMP
DIF AMP
DELAY
DTC CONT
SW
TP1002
PB EE 5V
SVR1011
Q1301
2SA608
BUFFER AMP
S1001
4231V20600
AV
TN
VIDEO
B1301
2SC3399
SWITCH
Q1340
2SC2839
BUFFER AMP
Q1303
2SC53
BUFFE
PB 5V
DL1301
4228V16100
SP.H
L1105
TP1010
TP1008
TP1006
SECAM H
BUFFER AMP
Q1102
2SC536
HIC 1001
Y GATE
M M
PAL SECAM NTSC
SUB DEMY
PAL/SECAM MODE DET
X TAL VCO
ADC DET
VCO
APC P-COMP
SCHMITT
KILLER P-COMP
90 SHIFT
1/4
4A GATE
DC COMP
DPC PC
N.V.
1/2
D-PLL
1/321
AFC
BURST GATE
FREQ DET
SECAM DET
MAIN CONV
REC
PB
REG 5V
GND
F1102
4953V23000
PB-C AMP
Q1101
2SC536
L1109
DL1101
4284V19400
Q1103
2SC536
SWITCH
D1101
F1101
4228V19300
B.P.F
L.P.F
Q1105
2SA608
BUFFER AMP
REC C
D1102
D1104
Q1252
2SC536
Q1251
2SC536
REC EE H
PB 5V
B1302
2SA1345
SWITCH
Q1304
2SA96
SWITC
Q1306
2SC536
SWITCH
Q1307
2SA984
SWITCH
B1303
2SA1348
SWITCH
Q1308
2SC536
B1304
2SA1345
SWITCH
VOLTAGE: REC(PLAY) MOD

—— : REC mode C SIGNAL

– — – — : C SUB SIGNAL

– – – – – : REC mode Y SIGNAL

▬▬▬ : VIDEO INPUT SIGNAL

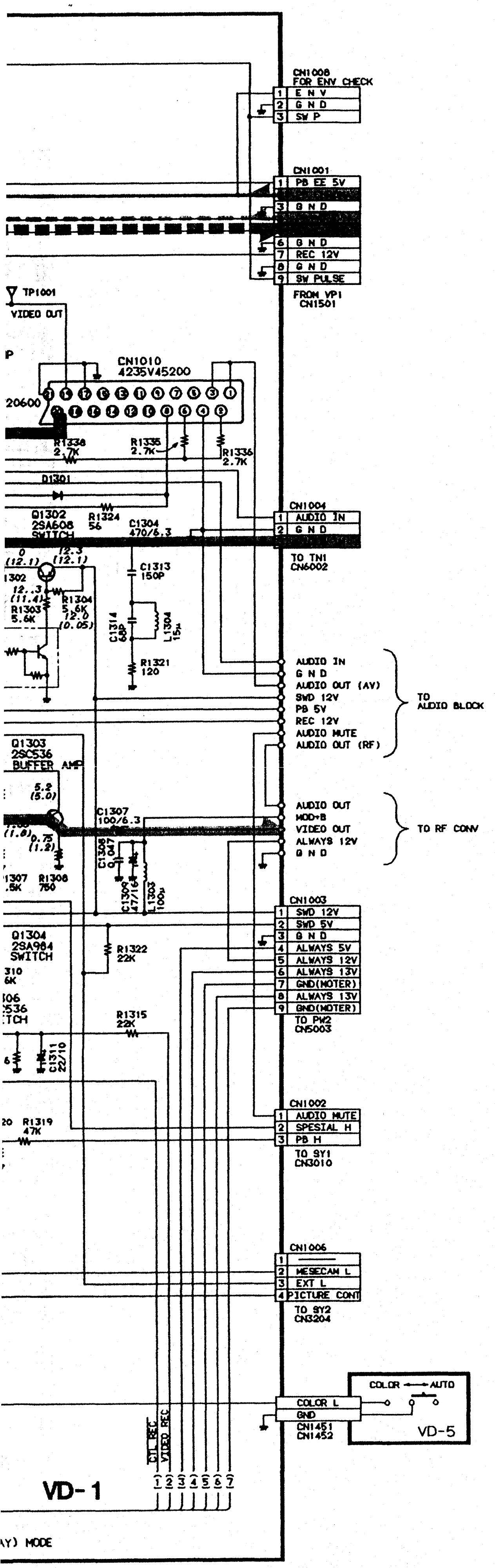
▬ ▬ ▬ : REC mode Y+C CURRENT

—— : PLAY mode C SIGNAL

– – – – – : PLAY mode Y SIGNAL

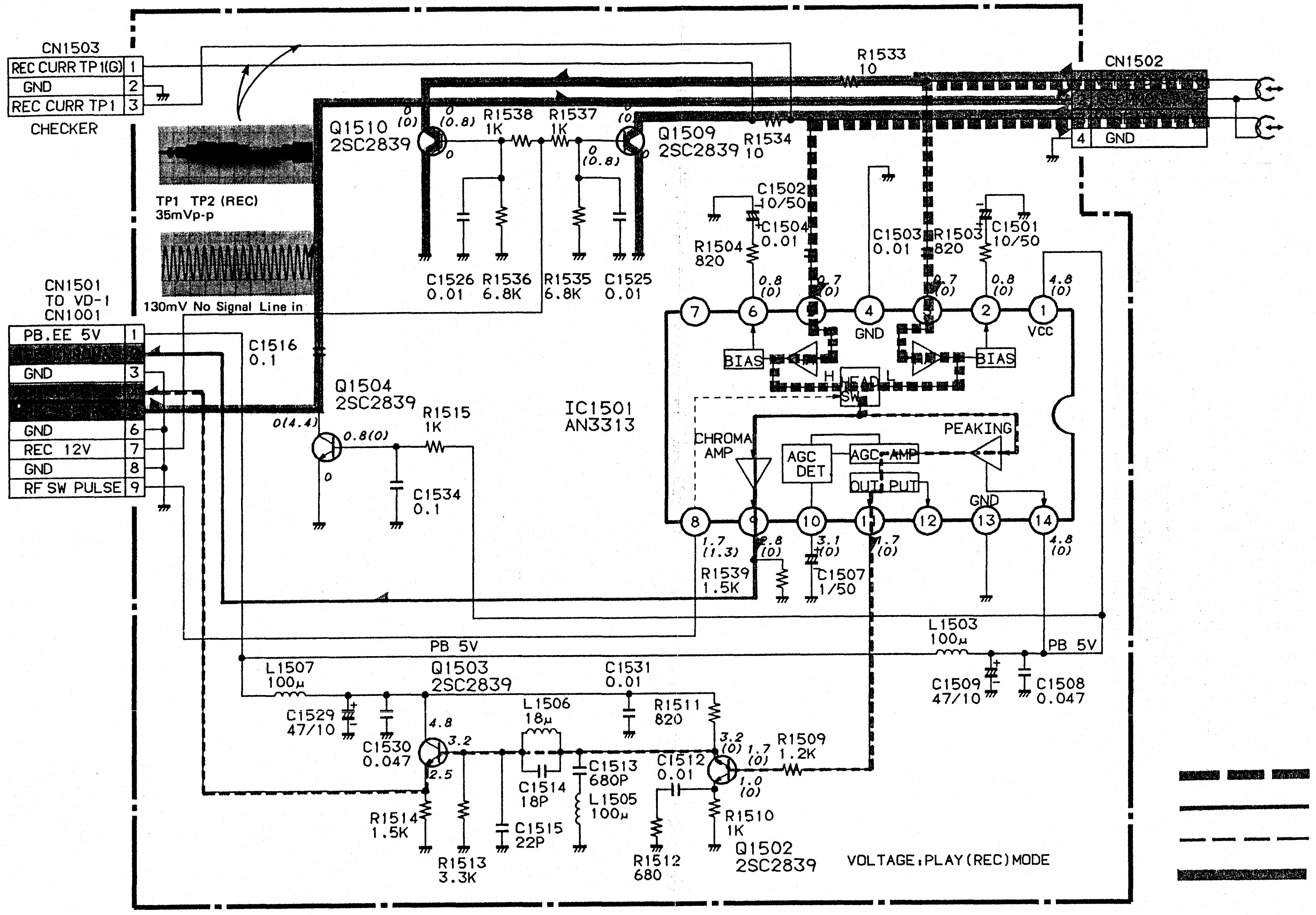
▬▬▬ : PLAY mode VIDEO OUTPUT SIGNAL

▬ ▬ ▬ : PLAY mode Y+C SIGNAL



CN1008 FOR ENV CHECK
ENV
GND
SW P
CN1001
PB EE 5V
GND
GND
REC 12V
GND
SW PULSE
FROM VP1 CN1501
TP1001 VIDEO OUT
CN1010 4235V45200
R1336 2.7K
R1335 2.7K
R1336 2.7K
D1301
Q1302 2SA608 SWITCH
R1324 56
C1304 470/6.3
CN1004
AUDIO IN
GND
TO TN1 CN6002
C1313 150P
R1304 5.6K
R1303 5.6K
C1314 68P
L1304 15μ
R1321 120
AUDIO IN
GND
AUDIO OUT (AV)
SWD 12V
PB 5V
REC 12V
AUDIO MUTE
AUDIO OUT (RF)
TO AUDIO BLOCK
Q1303 2SC536 BUFFER AMP
C1307 100/6.3
AUDIO OUT
MOD+B
VIDEO OUT
ALWAYS 12V
GND
TO RF CONV
R1307 R1308 750
CN1003
SWD 12V
SWD 5V
GND
ALWAYS 5V
ALWAYS 12V
ALWAYS 13V
GND(MOTER)
ALWAYS 13V
GND(MOTER)
TO PW2 CN5003
Q1304 2SA984 SWITCH
R1322 22K
R1315 22K
C1311 22/10
R1319 47K
CN1002
AUDIO MUTE
SPESIAL H
PB H
TO SY1 CN3010
CN1006
MESECAM L
EXT L
PICTURE CONT
TO SY2 CN3204
COLOR L
GND
CN1451 CN1452
COLOR — AUTO
VD-5
TRI REC
VIDEO REC
VD-1
AY) MODE

## P.C.B. VP-1 VIDEO PRE-AMP CIRCUIT DIAGRAM (143-0-233V12400)



CN1503
REC CURR TP1(G)
GND
REC CURR TP1
CHECKER
TP1 TP2 (REC) 35mVp-p
130mV No Signal Line in
CN1501 TO VD-1 CN1001
PB.EE 5V
GND
GND
REC 12V
GND
RF SW PULSE
R1533 10
CN1502
4 GND
Q1510 2SC2839
R1538 1K
R1537 1K
Q1509 2SC2839
R1534 10
C1526 0.01
R1536 6.8K
R1535 6.8K
C1525 0.01
C1502 10/50
C1504 0.01
R1504 820
C1503 0.01
R1503 820
C1501 10/50
C1516 0.1
Q1504 2SC2839
R1515 1K
C1534 0.1
IC1501 AN3313
GND
VCC
BIAS
HEAD SW
CHROMA AMP
AGC DET
AGC AMP
OUT PUT
PEAKING
GND
R1539 1.5K
C1507 1/50
PB 5V
L1503 100μ
PB 5V
C1509 47/10
C1508 0.047
L1507 100μ
Q1503 2SC2839
C1531 0.01
C1529 47/10
C1530 0.047
L1506 18μ
R1511 820
C1514 18P
C1513 680P
C1512 0.01
R1509 1.2K
L1505 100μ
R1514 1.5K
R1513 3.3K
C1515 22P
R1512 680
R1510 1K
Q1502 2SC2839
VOLTAGE:PLAY(REC)MODE

▬ ▬ ▬ : PLAY mode VIDEO SIGNAL

——— : PLAY mode C SIGNAL

– – – – : PLAY mode Y SIGNAL

▬▬▬ : REC mode Y+C SIGNAL

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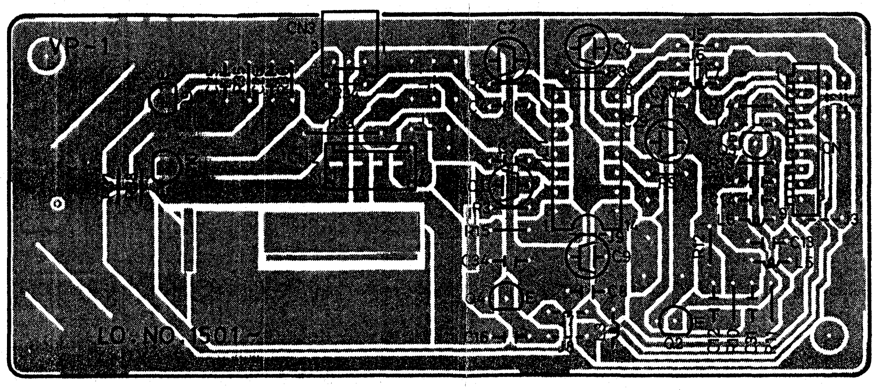
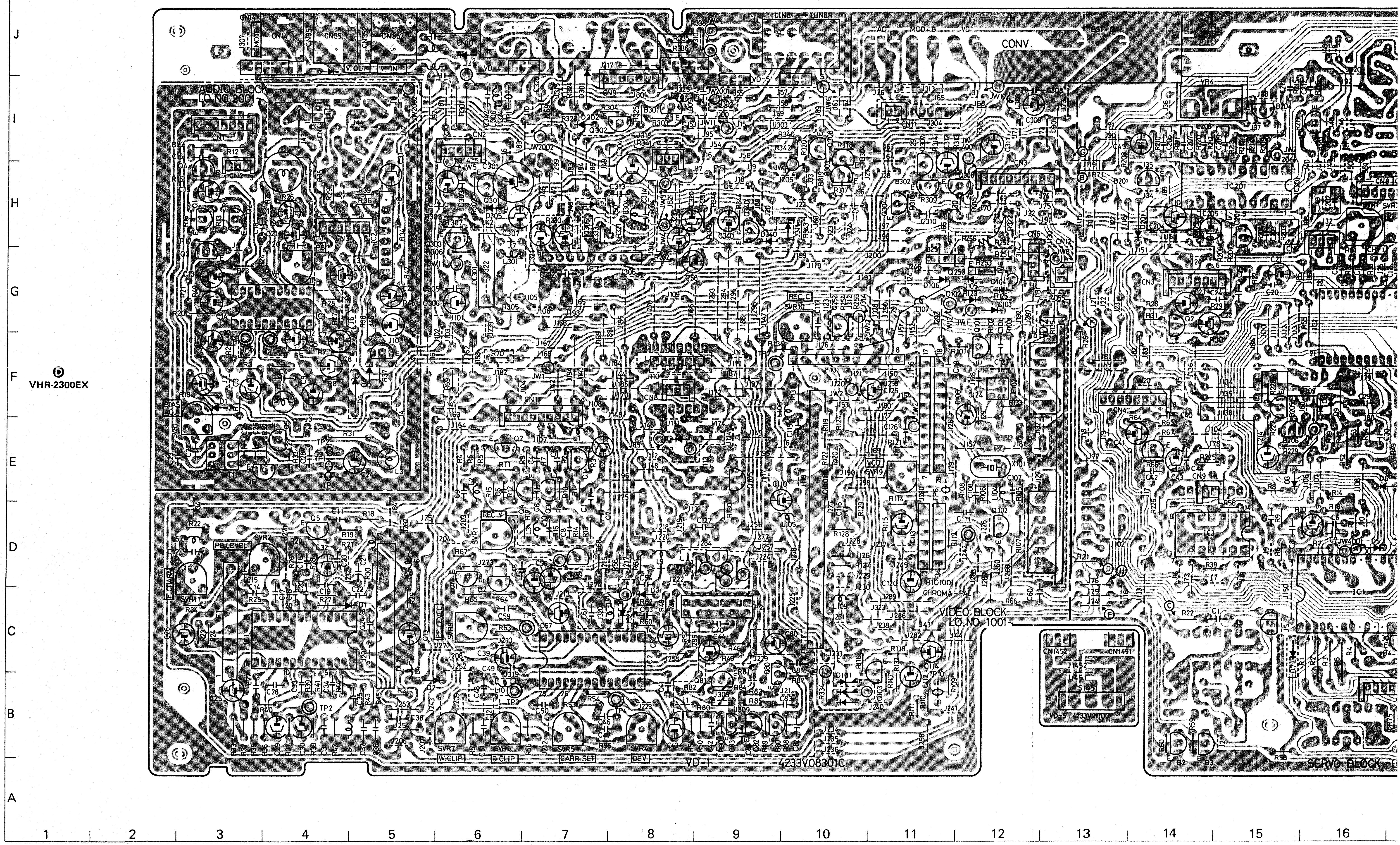
## P.C.B. VP-1 VIDEO PRE-AMP (143-0-233V12400)



16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

**P.C.B. VD-1, 5 VIDEO, AUDIO, SERVO (VD-1 143-0-233V08326)**
**(VD-5 143-0-233V21100)**
**[Serial No. of 55250001 and higher.]**

Ⓓ VHR-2300EX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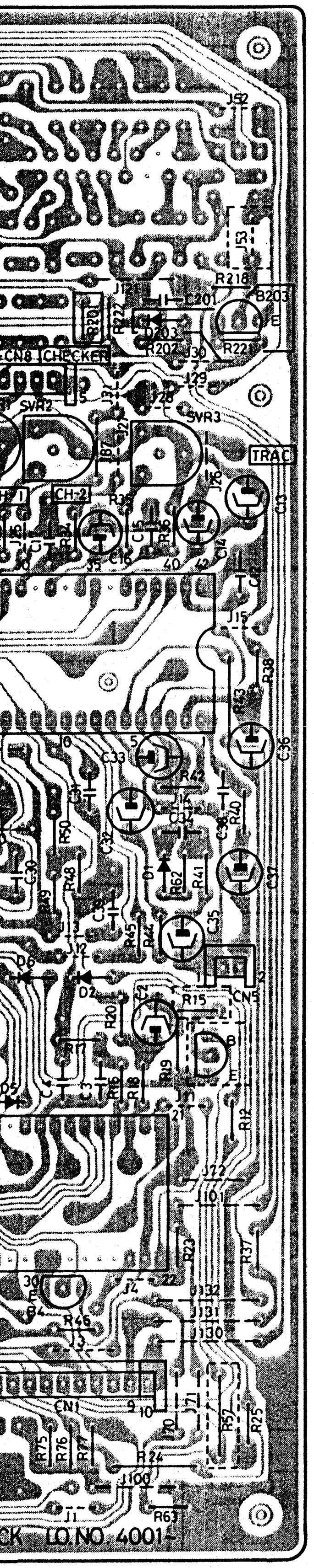
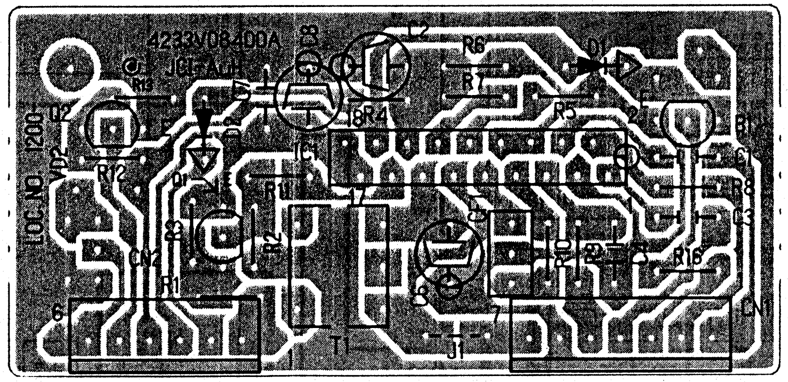
15
16
AUDIO BLOCK
LO.NO.2001
VIDEO BLOCK
LO.NO.1001
SERVO BLOCK
VD-1
4233V08301C
VD-5 4233V21100
VD-4
CONV.
LINE ↔ TUNER
AD
MOD・B
VD
BST・B
V.OUT
V.IN
REMOTE
CN14
CN351
CN352
CN10
CN1452
CN1451
S145
IC1
IC3
HIC1001
CHROMA-PAL
DL101
DL1
PB.LEVEL
F.CHARA
BIAS ADJ
REC.Y
REC.C
PE LEVEL
W.CLIP
D.CLIP
CARR.SET
DEV.
SVR1
SVR2
SVR4
SVR5
SVR6
SVR7
SVR8
SVR9
SVR10
SVR11
VCO
TP1
TP2
TP3
TP4
TP5
TP10

4

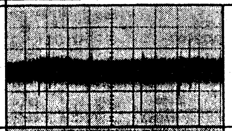
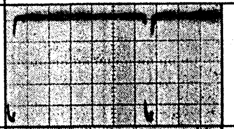
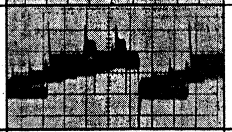
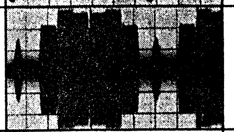
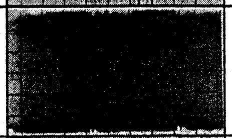
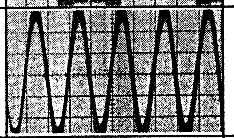
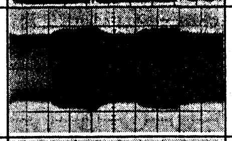
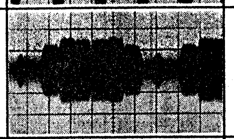
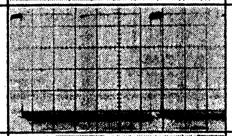
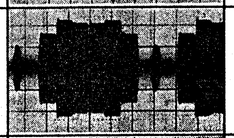
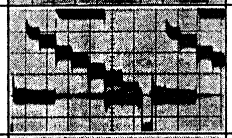
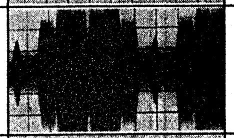
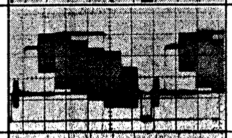
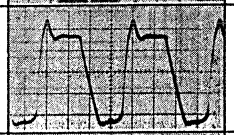
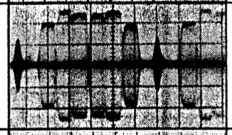
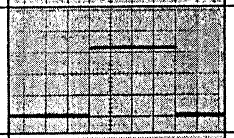
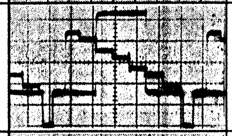
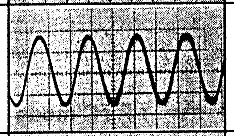
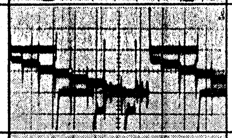
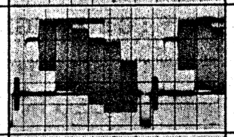
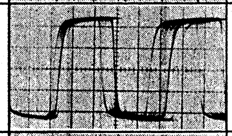
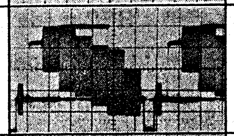
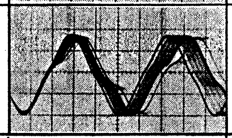
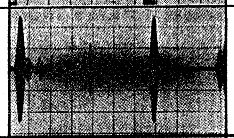
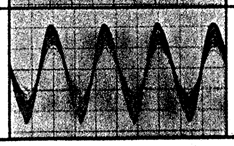

J52
J53
R218
B203
CN8
CHECKER
SVR2
SVR3
TRAC
CH-2
CN1
LO.NO. 4001

## P.C.B. VD-2 VIDEO (143-0-233V08400)

**[Serial No. of 55250001 and higher.]**

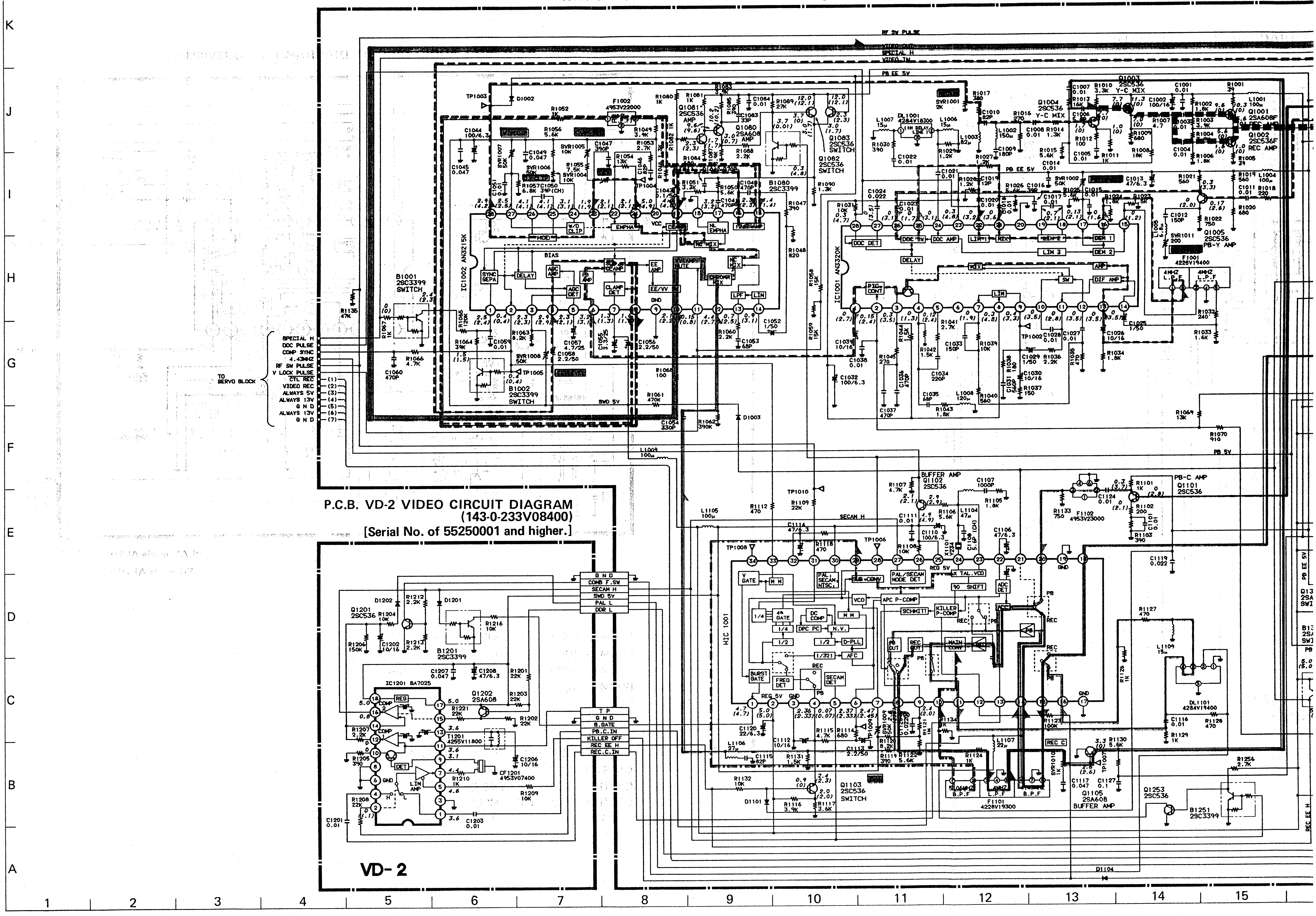

4233V08400A
LO. NO. 1201
R3
R4
R6
R7
R5
R1
R16
CN

## WAVEFORM OF VIDEO

| Pin No. | | | Pin No. | | |
|---|---|---|---|---|---|
| IC1001<br>⑨ |  | PLAY 12 mVp-p | HIC1001<br>① |  | PLAY/REC 5 Vp-p |
| ⑬ |  | PLAY 120 mVp-p | ⑧ |  | REC 1.05 Vp-p |
| ⑯ |  | PLAY 1.1 Vp-p | ⑩ |  | PLAY/REC<br>120 mVp-p |
| ㉖ |  | PLAY 750 mVp-p | ⑪ |  | PLAY 1.4Vp-p |
| IC1002<br>② |  | PLAY/REC 4.8 Vp-p | ⑭ |  | REC 220 mVp-p<br>PLAY 560 mVp-p |
| ⑥⑧ |  | PLAY ⑥ 220 mVp-p<br>⑧ 750 mVp-p | ⑳ |  | PLAY 120 mVp-p |
| ⑩ |  | REC/EE 2 Vp-p | ㉘ |  | PLAY/REC 950 mVp-p<br>5,015 MHz |
| ⑫ |  | PLAY 500 mVp-p | ㉛ |  | PLAY/REC 630 mVp-p |
| ⑲ |  | REC 1.05 Vp-p | Q1002<br>Ⓔ |  | PLAY/REC 600 mVp-p<br>4.43 MHz |
| ㉑ |  | REC 280 mVp-p | Q1340<br>Ⓔ |  | REC/EE 990 mVp-p |
| ㉘ |  | REC 920 mVp-p | TP1001 |  | PLAY/REC 1 Vp-p |
| CN1001<br>⑤ |  | REC 3.7 Vp-p | IC1201<br>⑨ |  | REC/PLAY [SECAM]<br>0.5Vp-p |
| | | | TP1201 |  | REC/PLAY [SECAM]<br>4.6Vp-p (7.813 kHz) |

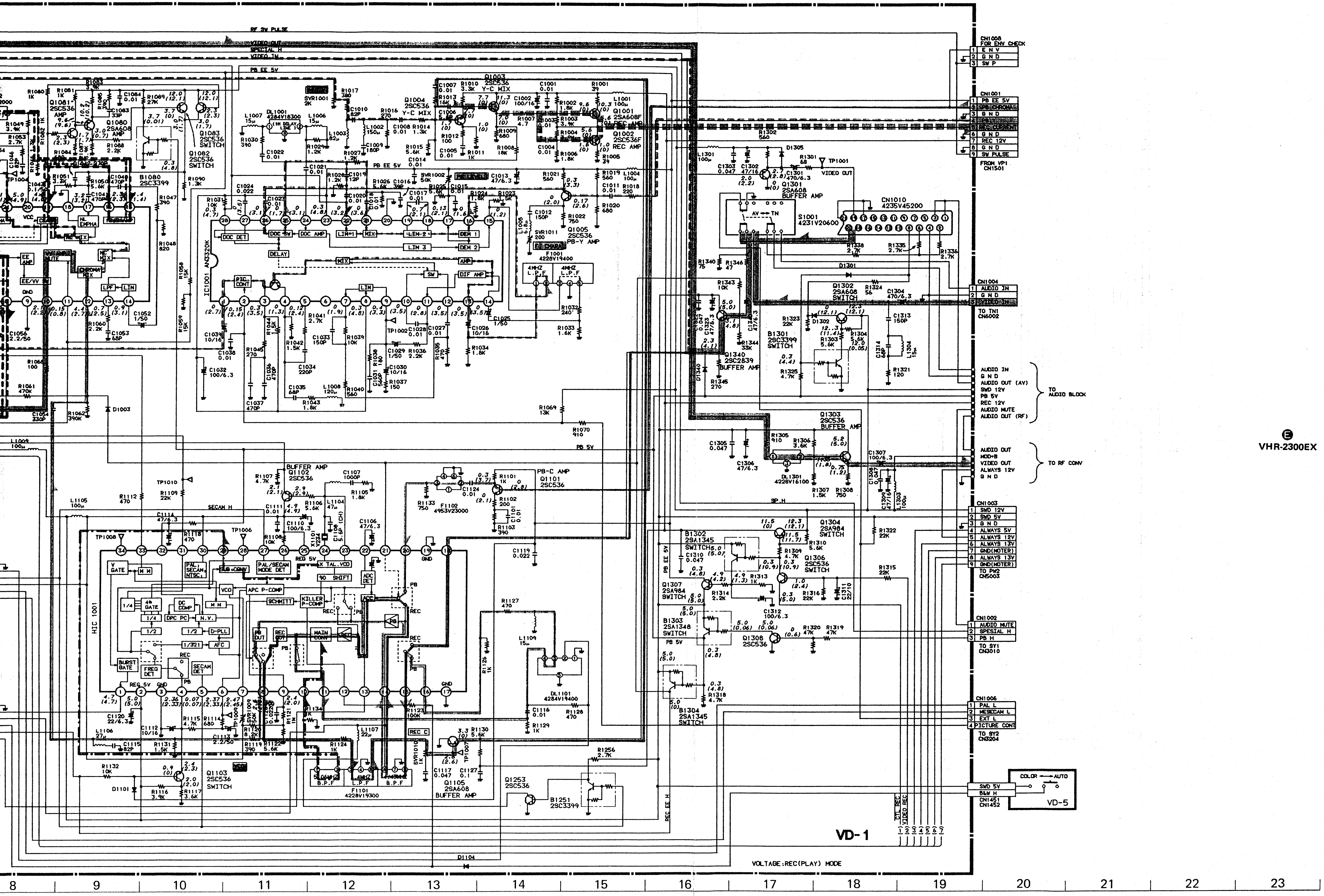
## P.C.B. VD-1, 5 VIDEO CIRCUIT DIAGRAM [Serial No. of 55250001 and higher.] (VD-1 143-0-233V08326) (VD-5 143-0-233V21

## P.C.B. VD-2 VIDEO CIRCUIT DIAGRAM
(143-0-233V08400)
[Serial No. of 55250001 and higher.]


K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
RF SW PULSE
SPECIAL H
VIDEO IN
PB EE 5V
TP1003
D1002
F1002 4953V22000
IC1002 AN3215K
B1001 2SC3399 SWITCH
B1002 2SC3399 SWITCH
SYNC SEPA
DELAY
AGC AMP
AGC DET
CLAMP DET
EE AMP
W/D CLIP
EMPHA
MOD
NL EMPHA
NL MIX
BIAS
VCC
GND
EE/VV SW
LPF
LIM
Q1081 2SC536 AMP
Q1080 2SA608 AMP
Q1083 2SC536 SWITCH
Q1082 2SC536 SWITCH
B1080 2SC3399
SPECIAL H
DOC PULSE
COMP SYNC
4.43MHZ
RF SW PULSE
V LOCK PULSE
CTL REC
VIDEO REC
ALWAYS 5V
ALWAYS 13V
G N D
ALWAYS 13V
G N D
TO SERVO BLOCK
SWD 5V
D1003
L1009 100μ
DL1001 4284V18300 1H DELAY LINE
IC1001 AN3320K
DOC DET
DOC SW
DOC AMP
LIM
MIX
DEM
DEM 1
DEM 2
LIM 3
PIC CONT
DIF AMP
SW
4MHZ L.P.F
Q1004 2SC536 Y-C MIX
Q1003 2SC536 Y-C MIX
Q1001 2SA608F
Q1002 2SC536F REC AMP
Q1005 2SC536 PB-Y AMP
F1001 4228V19400
TP1002
PB EE 5V
PB 5V
R1069 13K
R1070 910
BUFFER AMP Q1102 2SC536
PB-C AMP Q1101 2SC536
F1102 4953V23000
TP1010
TP1008
TP1006
SECAM H
HIC 1001
V GATE
M M
PAL SECAM NISC
SUB-CONV
PAL/SECAM MODE DET
X TAL VCO
90 SHIFT
ADC DET
VCO
APC P-COMP
SCHMITT
KILLER P-COMP
1/4
4fc GATE
DC COMP
DPC PC
N.V.
1/2
D-PLL
1/321
AFC
BURST GATE
FREQ DET
SECAM DET
PB OUT
REC OUT
MAIN CONV
REC
PB
REG 5V
GND
REC C
Q1103 2SC536 SWITCH
D1101
B.P.F
L.P.F
F1101 4228V19300
Q1105 2SA608 BUFFER AMP
DL1101 4284V19400
Q1253 2SC536
B1251 2SC3399
D1104
IC1201 BA7025
Q1201 2SC536
D1202
D1201
B1201 2SC3399
Q1202 2SA608
T1201 4255V11800
CF1201 4953V07400
REG
COMP
DET
LIN AMP
G N D
COMB F.SW
SECAM H
SWD 5V
PAL L
DDR L
T P
G N D
B.GATE
PB.C.IN
KILLER OFF
REC EE H
REC.C.IN
VD-2

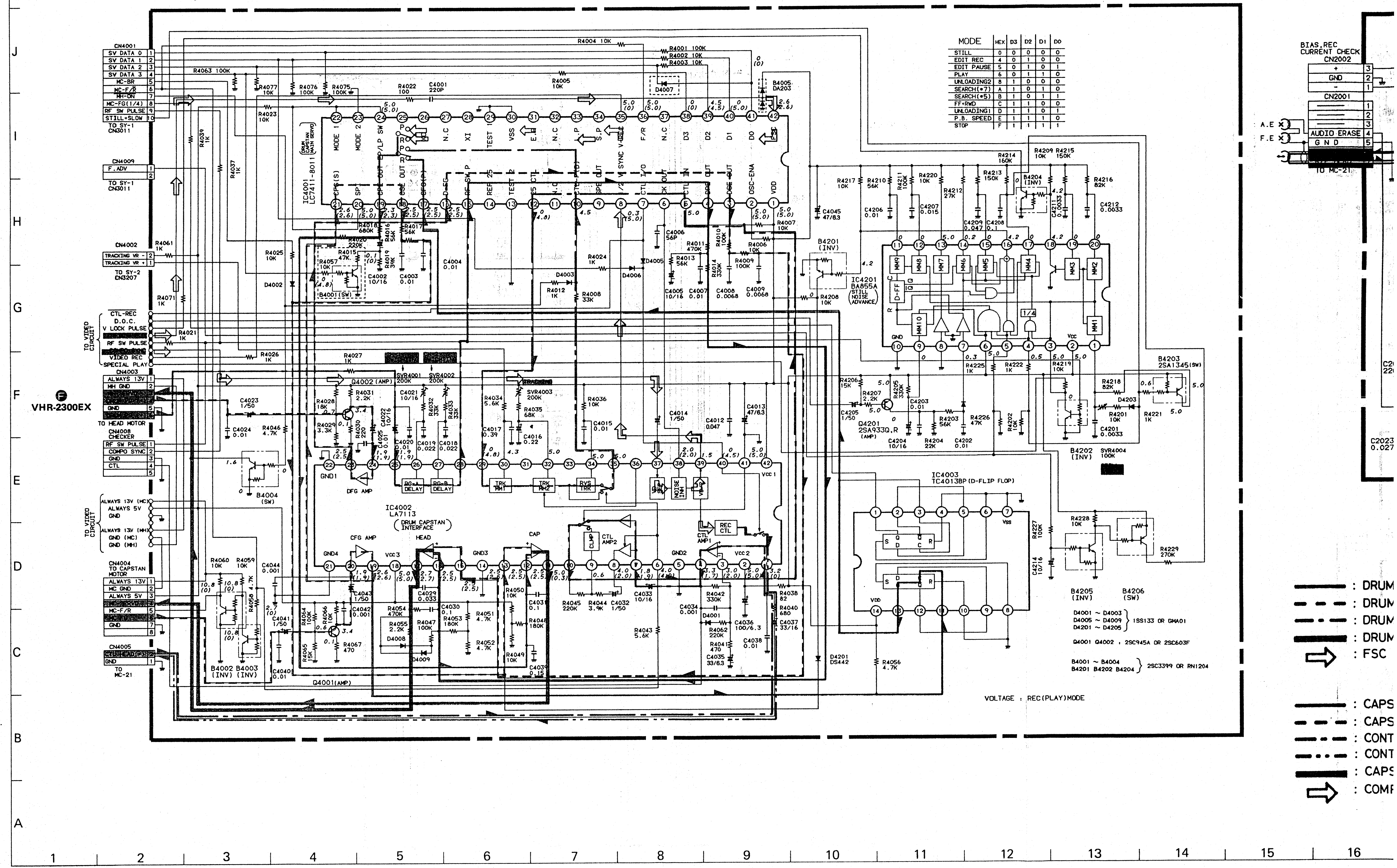
5

## 5 VIDEO CIRCUIT DIAGRAM [Serial No. of 55250001 and higher.] (VD-1 143-0-233V08326) (VD-5 143-0-233V21100)


RF SW PULSE
VIDEO OUT
SPECIAL H
VIDEO IN
PB EE 5V
CN1008
FOR ENV CHECK
1 ENV
2 GND
3 SW P
CN1001
1 PB EE 5V
2 PB CHROMA
3 GND
4 PB Y
5 REC CURRENT
6 GND
7 REC 12V
8 GND
9 SW PULSE
FROM VP1
CN1501
Q1003
2SC536
Y-C MIX
Q1004
2SC536
Y-C MIX
Q1001
2SA608F
REC AMP
Q1002
2SC536F
REC AMP
Q1005
2SC536
PB-Y AMP
Q1080
2SA608
AMP
Q1081
2SC536
AMP
Q1082
2SC536
SWITCH
Q1083
2SC536
SWITCH
B1080
2SC3399
DL1001
4284V18300
IC1001 AN3320K
DOC DET
DOC SW
DOC AMP
LIM-1
MIX
LIM-2
DEM 1
LIM 3
DEM 2
DELAY
PIC CONT
SW
AMP
DIF AMP
NL EMPHA
EE AMP
EE/VV
CHROMA MIX
LPF
LIM
4MHZ L.P.F
F1001
4228V19400
Q1301
2SA608
BUFFER AMP
TP1001
VIDEO OUT
CN1010
4235V45200
S1001
4231V20600
AV TN
Q1302
2SA608
SWITCH
B1301
2SC3399
SWITCH
Q1340
2SC2839
BUFFER AMP
CN1004
1 AUDIO IN
2 GND
3 VIDEO IN
TO TN1
CN6002
AUDIO IN
GND
AUDIO OUT (AV)
SWD 12V
PB 5V
REC 12V
AUDIO MUTE
AUDIO OUT (RF)
TO AUDIO BLOCK
Q1303
2SC536
BUFFER AMP
DL1301
4228V16100
AUDIO OUT
MOD+B
VIDEO OUT
ALWAYS 12V
GND
TO RF CONV
Q1101
2SC536
PB-C AMP
Q1102
2SC536
BUFFER AMP
F1102
4953V23000
SECAM H
HIC 1001
V GATE
M M
PAL/SECAM NTSC
SUB-CONV
PAL/SECAM MODE DET
X TAL VCO
90 SHIFT
ADC DET
VCO
APC P-COMP
SCHMITT
KILLER P-COMP
ACC
1/4
4H GATE
DC COMP
DPC PC
N.V.
1/2
1/321
D-PLL
AFC
BURST GATE
FREQ DET
SECAM DET
PB OUT
REC OUT
MAIN CONV
REC
PB
GND
REG 5V
DL1101
4284V19400
F1101
4228V19300
4.43MHZ B.P.F
4MHZ L.P.F
REC C
Q1105
2SA608
BUFFER AMP
Q1103
2SC536
SWITCH
Q1253
2SC536
B1251
2SC3399
Q1304
2SA984
SWITCH
B1302
2SA1345
SWITCH
Q1306
2SC536
SWITCH
Q1307
2SA984
SWITCH
B1303
2SA1348
SWITCH
Q1308
2SC536
B1304
2SA1345
SWITCH
CN1003
1 SWD 12V
2 SWD 5V
3 GND
4 ALWAYS 5V
5 ALWAYS 12V
6 ALWAYS 13V
7 GND(MOTER)
8 ALWAYS 13V
9 GND(MOTER)
TO PW2
CN5003
CN1002
1 AUDIO MUTE
2 SPESIAL H
3 PB H
TO SY1
CN3010
CN1006
1 PAL L
2 MESECAM L
3 EXT L
4 PICTURE CONT
TO SY2
CN3204
SWD 5V
B&W H
CN1451
CN1452
COLOR AUTO
VD-5
VD-1
C1 L REC
VIDEO REC
1 2 3 4 5 6 7
REC EE H
PB EE 5V
SP.H
D1104
VOLTAGE:REC(PLAY) MODE
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Ⓔ
VHR-2300EX

# P.C.B. VD-1 SERVO CIRCUIT DIAGRAM (143-0-233V08342)


K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
CN4001
SV DATA 0
SV DATA 1
SV DATA 2
SV DATA 3
MC-BR
MC-F/R
MH-ON
MC-FG(1/4)
RF SW PULSE
STILL+SLOW
TO SY-1 CN3011
CN4009
F.ADV
TO SY-1 CN3011
CN4002
TRACKING VR -
TRACKING VR +
TO SY-2 CN3207
TO VIDEO CIRCUIT
CTL-REC
D.O.C.
V LOCK PULSE
RF SW PULSE
VIDEO REC
SPECIAL PLAY
CN4003
ALWAYS 13V
MH GND
GND
TO HEAD MOTOR
F
VHR-2300EX
CN4008 CHECKER
RF SW PULSE
COMPO SYNC
GND
CTL
ALWAYS 13V (MC)
ALWAYS 5V
GND
ALWAYS 13V (MH)
GND (MC)
GND (MH)
CN4004 TO CAPSTAN MOTOR
ALWAYS 13V
MC GND
ALWAYS 5V
MC-F/R
GND
CN4005
GND
TO MC-21
IC4001 LC7411-8011 (DRUM CAPSTAN MAIN SERVO)
MODE 1
MODE 2
SP/LP SW
N.C
XI
TEST
VSS
N.C
F/R
N.C
D3
D2
D1
D0
CPC(S)
SP
REF 25
TEST 2
RF SW P
N.C
CTL I/O
CK OUT
CTL IN
DOC OUT
OSC-ENA
VDD
IC4002 LA7113 (DRUM CAPSTAN INTERFACE)
CFG AMP
HEAD
CAP
GND1
GND2
GND3
GND4
VCC1
VCC2
VCC3
DFG AMP
TRK MM1
TRK MM2
RVS TRK
CTL AMP1
CTL AMP2
REC CTL
Q4001 (AMP)
Q4002 (AMP)
SVR4001 200K
SVR4002 200K
SVR4003 200K
TRACKING
B4001 (SW)
B4002 (INV)
B4003 (INV)
B4004 (SW)
IC4201 BA855A (STILL NOISE ADVANCE)
MM1
MM2
MM3
MM4
MM5
MM6
MM7
MM8
MM9
MM10
D-FF
B4201 (INV)
B4202 (INV)
B4203 2SA1345(SW)
B4204 (INV)
SVR4004 100K
Q4201 2SA933Q,R (AMP)
D4201 DS442
IC4003 TC4013BP (D-FLIP FLOP)
BIAS,REC CURRENT CHECK CN2002
CN2001
A.E
F.E
AUDIO ERASE
GND
TO MC-21
C2023 0.027
: DRUM
: DRUM
: DRUM
: DRUM
: FSC
: CAPS
: CAPS
: CONT
: CONT
: CAPS
: COMP

| MODE | HEX | D3 | D2 | D1 | D0 |
|---|---|---|---|---|---|
| STILL | 0 | 0 | 0 | 0 | 0 |
| EDIT REC | 4 | 0 | 1 | 0 | 0 |
| EDIT PAUSE | 5 | 0 | 1 | 0 | 1 |
| PLAY | 6 | 0 | 1 | 1 | 0 |
| UNLOADING2 | 8 | 1 | 0 | 0 | 0 |
| SEARCH(•7) | A | 1 | 0 | 1 | 0 |
| SEARCH(•5) | B | 1 | 0 | 1 | 1 |
| FF+RWD | C | 1 | 1 | 0 | 0 |
| UNLOADING1 | D | 1 | 1 | 0 | 1 |
| P.B. SPEED | E | 1 | 1 | 1 | 0 |
| STOP | F | 1 | 1 | 1 | 1 |

B4205 (INV)
B4206 (SW)

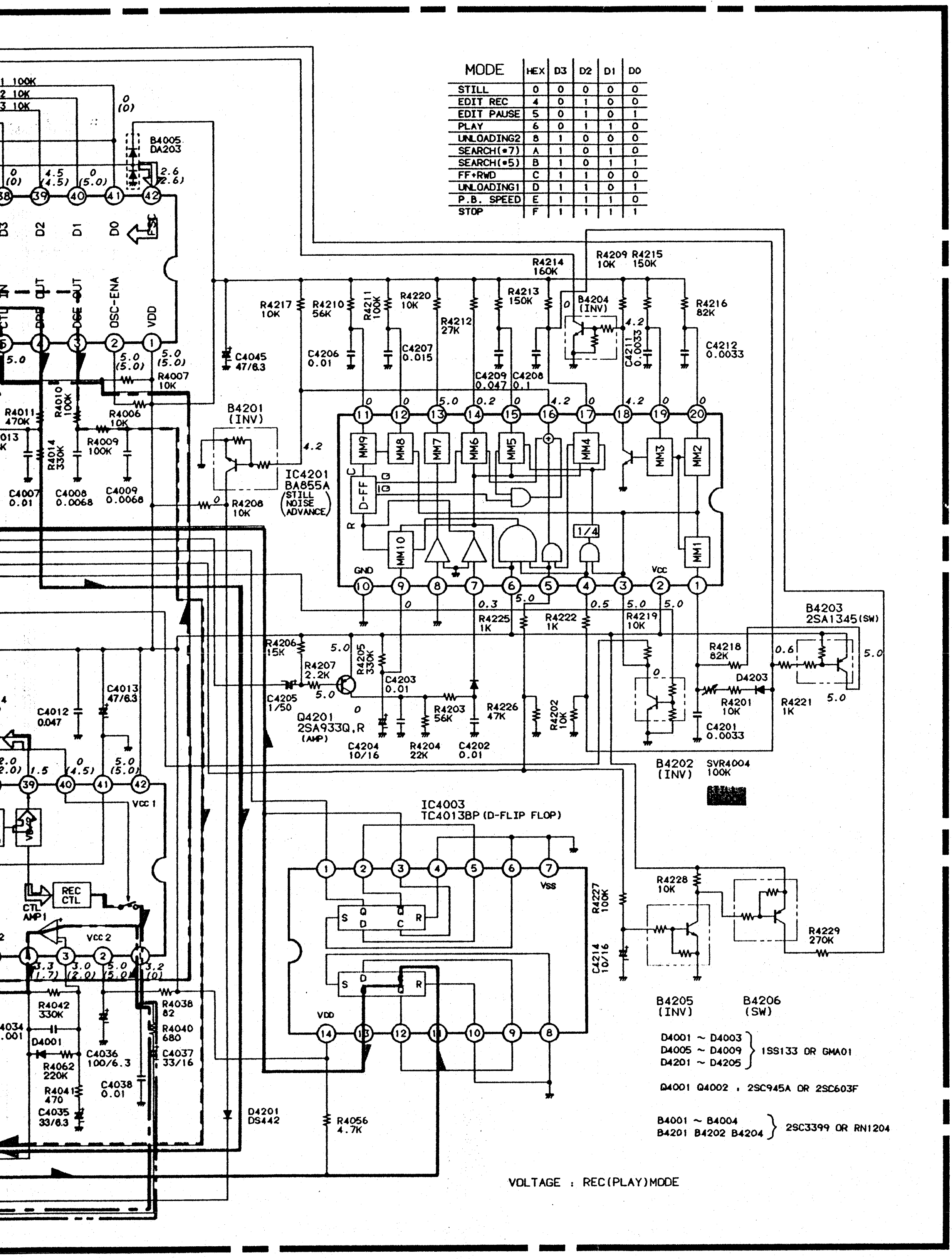
D4001 ~ D4003, D4005 ~ D4009, D4201 ~ D4205 } 1SS133 OR GMA01

Q4001 Q4002 : 2SC945A OR 2SC603F

B4001 ~ B4004, B4201 B4202 B4204 } 2SC3399 OR RN1204

VOLTAGE : REC(PLAY)MODE

## DIAGRAM (143-0-233V08342)


IC4201
BA855A
(STILL NOISE ADVANCE)
IC4003
TC4013BP (D-FLIP FLOP)
Q4201
2SA933Q,R
(AMP)
B4201
(INV)
B4202
(INV)
B4203
2SA1345(SW)
B4204
(INV)
B4005
DA203
SVR4004
100K
D4201
DS442
OSC-ENA
VDD
VSS
VCC
GND
D-FF
MM1
MM2
MM3
MM4
MM5
MM6
MM7
MM8
MM9
MM10
1/4
REC CTL
CTL AMP1
VCC 1
VCC 2
R4214 160K
R4209 10K
R4215 150K
R4213 150K
R4217 10K
R4210 56K
R4211 100K
R4220 10K
R4212 27K
R4216 82K
R4207 2.2K
R4205 330K
R4206 15K
R4203 56K
R4204 22K
R4226 47K
R4225 1K
R4222 1K
R4219 10K
R4218 82K
R4201 10K
R4221 1K
R4202 10K
R4208 10K
R4227 100K
R4228 10K
R4229 270K
R4056 4.7K
R4007 10K
R4006 10K
R4009 100K
R4010 100K
R4011 470K
R4014 330K
R4042 330K
R4038 82
R4040 680
R4041 470
R4062 220K
C4045 47/6.3
C4206 0.01
C4207 0.015
C4209 0.047
C4208 0.1
C4211 0.0033
C4212 0.0033
C4205 1/50
C4203 0.01
C4204 10/16
C4202 0.01
C4201 0.0033
C4214 10/16
C4007 0.01
C4008 0.0068
C4009 0.0068
C4012 0.047
C4013 47/6.3
C4036 100/6.3
C4037 33/16
C4038 0.01
C4035 33/6.3
D4001
D4203
D3
D2
D1
D0
VOLTAGE : REC(PLAY)MODE

| MODE | HEX | D3 | D2 | D1 | D0 |
|---|---|---|---|---|---|
| STILL | 0 | 0 | 0 | 0 | 0 |
| EDIT REC | 4 | 0 | 1 | 0 | 0 |
| EDIT PAUSE | 5 | 0 | 1 | 0 | 1 |
| PLAY | 6 | 0 | 1 | 1 | 0 |
| UNLOADING2 | 8 | 1 | 0 | 0 | 0 |
| SEARCH(*7) | A | 1 | 0 | 1 | 0 |
| SEARCH(*5) | B | 1 | 0 | 1 | 1 |
| FF+RWD | C | 1 | 1 | 0 | 0 |
| UNLOADING1 | D | 1 | 1 | 0 | 1 |
| P.B. SPEED | E | 1 | 1 | 1 | 0 |
| STOP | F | 1 | 1 | 1 | 1 |

B4205 (INV)
B4206 (SW)

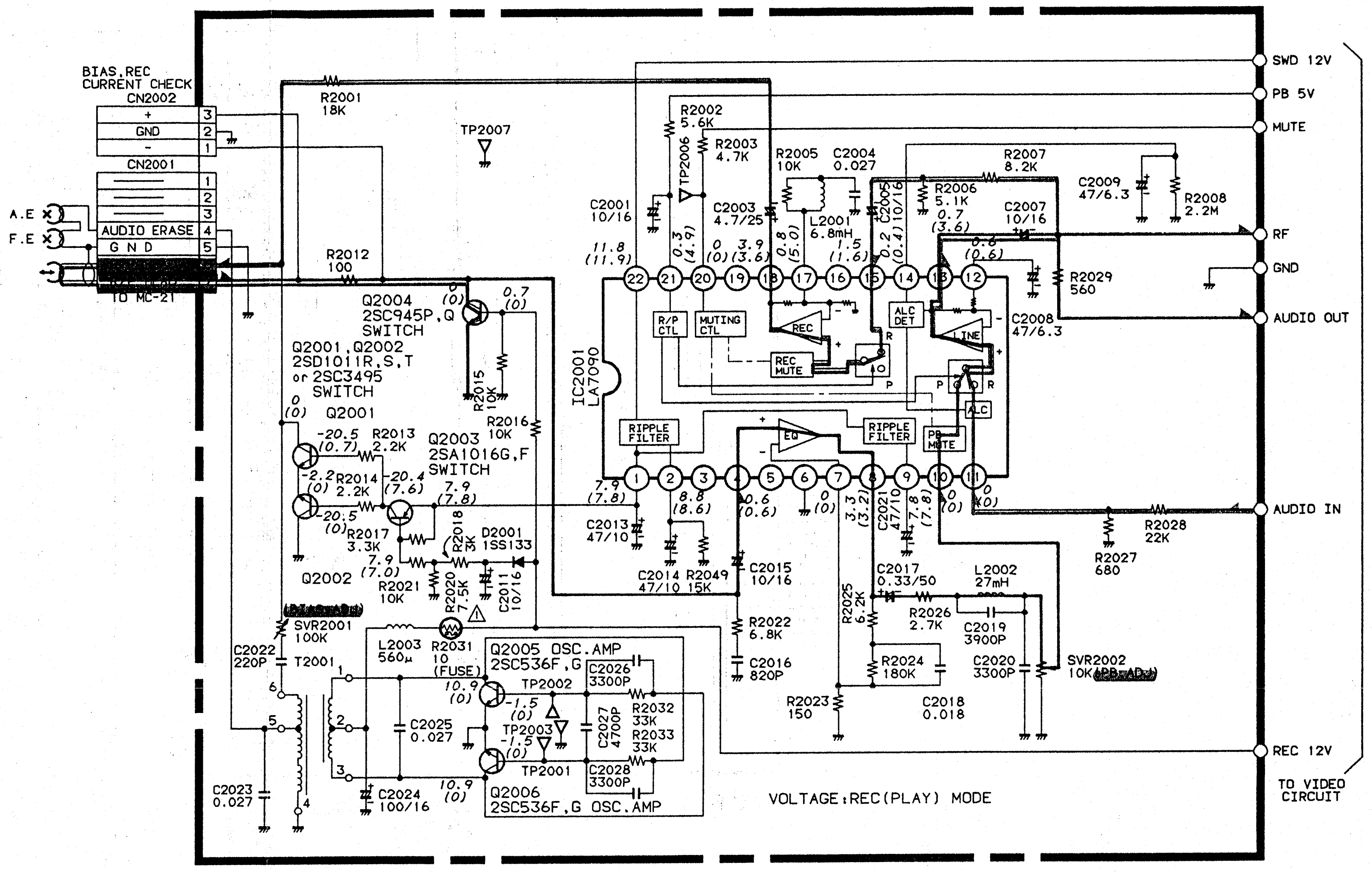
D4001 ~ D4003
D4005 ~ D4009 } 1SS133 OR GMA01
D4201 ~ D4205

Q4001 Q4002 , 2SC945A OR 2SC603F

B4001 ~ B4004
B4201 B4202 B4204 } 2SC3399 OR RN1204

VOLTAGE : REC(PLAY)MODE

## P.C.B. VD-1 AUDIO CIRCUIT DIAGRAM (143-0-233V08342)


BIAS, REC CURRENT CHECK
CN2002
GND
CN2001
AUDIO ERASE
GND
TO MC-21
A.E
F.E
IC2001
LA7090
Q2004
2SC945P,Q
SWITCH
Q2001, Q2002
2SD1011R,S,T
or 2SC3495
SWITCH
Q2001
Q2002
Q2003
2SA1016G,F
SWITCH
Q2005 OSC.AMP
2SC536F,G
Q2006
2SC536F,G OSC.AMP
D2001
1SS133
T2001
TP2007
TP2006
TP2002
TP2003
TP2001
SVR2001
100K
SVR2002
10K
R/P CTL
MUTING CTL
REC
REC MUTE
ALC DET
LINE
ALC
RIPPLE FILTER
EQ
PB MUTE
R2001 18K
R2002 5.6K
R2003 4.7K
R2005 10K
R2006 5.1K
R2007 8.2K
R2008 2.2M
R2012 100
R2013 2.2K
R2014 2.2K
R2015 10K
R2016 10K
R2017 3.3K
R2018 3K
R2020 7.5K
R2021 10K
R2022 6.8K
R2023 150
R2024 180K
R2025 6.2K
R2026 2.7K
R2027 680
R2028 22K
R2029 560
R2031 10 (FUSE)
R2032 33K
R2033 33K
R2049 15K
C2001 10/16
C2003 4.7/25
C2004 0.027
C2006 10/16
C2007 10/16
C2008 47/6.3
C2009 47/6.3
C2011 10/16
C2013 47/10
C2014 47/10
C2015 10/16
C2016 820P
C2017 0.33/50
C2018 0.018
C2019 3900P
C2020 3300P
C2021 47/10
C2022 220P
C2023 0.027
C2024 100/16
C2025 0.027
C2026 3300P
C2027 4700P
C2028 3300P
L2001 6.8mH
L2002 27mH
L2003 560μ
SWD 12V
PB 5V
MUTE
RF
GND
AUDIO OUT
AUDIO IN
REC 12V
TO VIDEO CIRCUIT
VOLTAGE : REC(PLAY) MODE

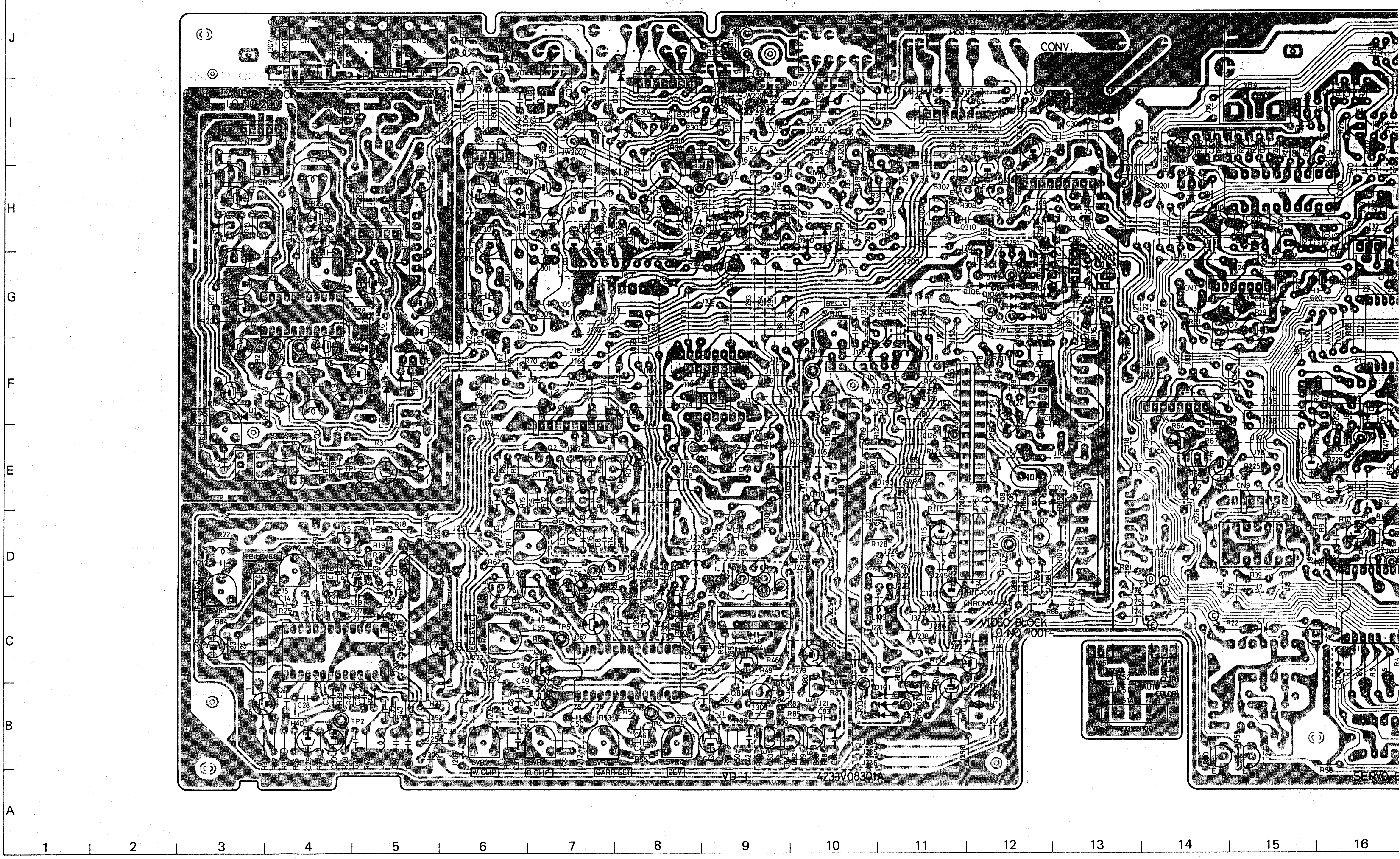
—— : PLAY mode AUDIO SIGNAL
—— : REC mode AUDIO SIGNAL

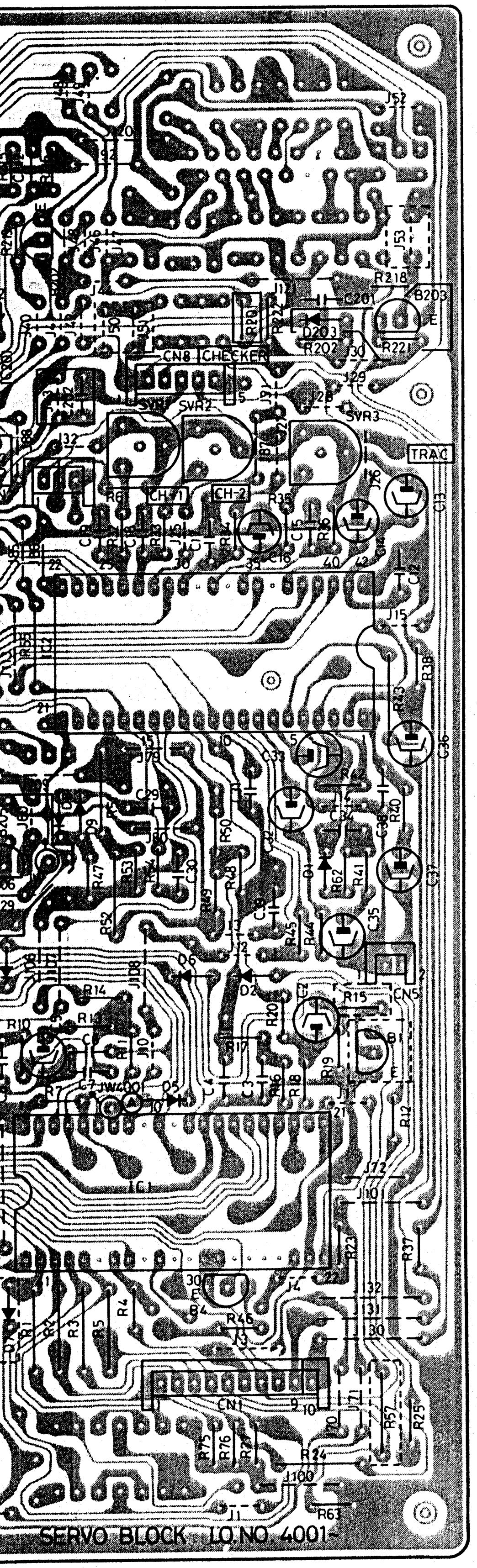
▬▬ : DRUM MOTOR PHASE CONTROL SIGNAL
– – – : DRUM MOTOR FG SIGNAL
–·– : DRUM MOTOR PHASE COMPARISION SIGNAL
▬▬ : DRUM MOTOR SERVO
⇨ : FSC

▬▬ : CAPSTAN MOTOR PHASE CONTROL SIGNAL
– – – : CAPSTAN MOTOR FG SIGNAL
–·– : CONTROL PULSE (PLAY MODE)
–··– : CONTROL PULSE (REC MODE)
▬▬ : CAPSTAN MOTOR SERVO
⇨ : COMPOSIT SIGNAL

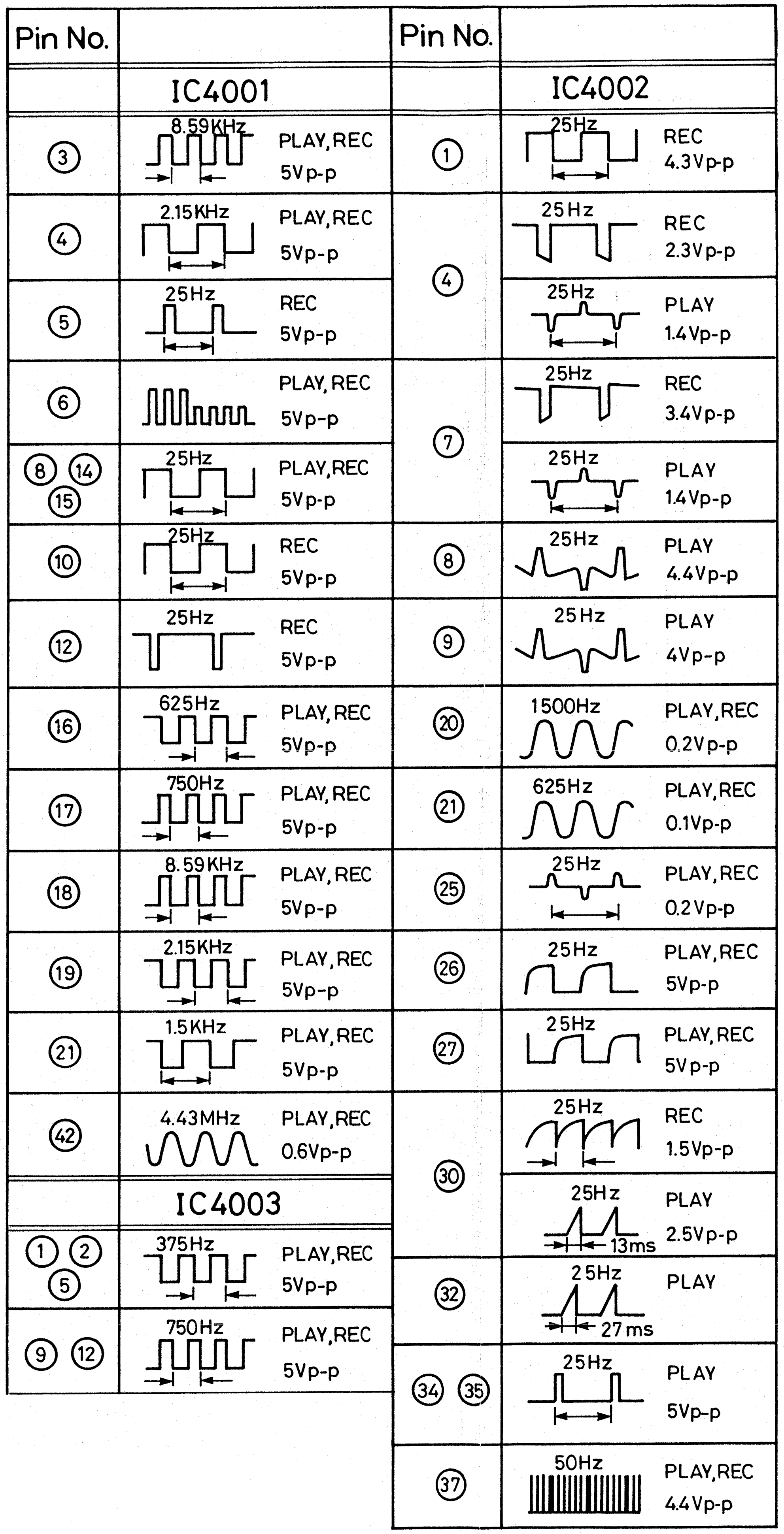
9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23

P.C.B. VD-1, 5 VIDEO, AUDIO, SERVO (VD-1 143-0-233V08342)
(VD-5 143-0-233V21100)


K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
AUDIO BLOCK
LO NO 2001
REMOTE
V.OUT
V.IN
LINE
TUNER
CONV.
BIAS ADJ
PB LEVEL
F.CHAR
FE LEVEL
REC-Y
REC-C
SVR1
SVR2
SVR7
SVR6
SVR5
SVR4
W.CLIP
D.CLIP
CARR.SET
DEV.
VD-1
4233V08301A
CHROMA-PA
VIDEO BLOCK
LO NO 1001
VD-5 4233V21100
SERVO-B

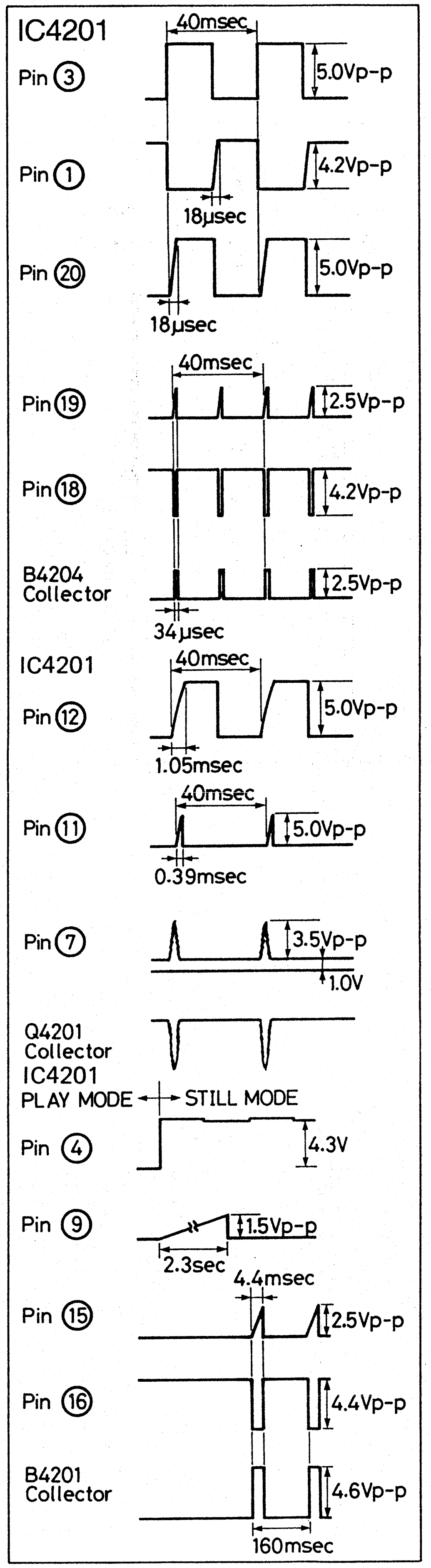

CN8 CHECKER
TRAC
CH-1
CH-2
IC1
CN1
CN5
SERVO BLOCK LO.NO.4001

## WAVEFORM OF SERVO



| Pin No. |  |  |  |
|---|---|---|---|
|  | IC4001 |  |  |
| ③ | 8.59KHz | PLAY,REC | 5Vp-p |
| ④ | 2.15KHz | PLAY,REC | 5Vp-p |
| ⑤ | 25Hz | REC | 5Vp-p |
| ⑥ |  | PLAY,REC | 5Vp-p |
| ⑧ ⑭ ⑮ | 25Hz | PLAY,REC | 5Vp-p |
| ⑩ | 25Hz | REC | 5Vp-p |
| ⑫ | 25Hz | REC | 5Vp-p |
| ⑯ | 625Hz | PLAY,REC | 5Vp-p |
| ⑰ | 750Hz | PLAY,REC | 5Vp-p |
| ⑱ | 8.59KHz | PLAY,REC | 5Vp-p |
| ⑲ | 2.15KHz | PLAY,REC | 5Vp-p |
| ㉑ | 1.5KHz | PLAY,REC | 5Vp-p |
| ㊷ | 4.43MHz | PLAY,REC | 0.6Vp-p |
|  | IC4003 |  |  |
| ① ② ⑤ | 375Hz | PLAY,REC | 5Vp-p |
| ⑨ ⑫ | 750Hz | PLAY,REC | 5Vp-p |

| Pin No. |  |  |  |
|---|---|---|---|
|  | IC4002 |  |  |
| ① | 25Hz | REC | 4.3Vp-p |
| ④ | 25Hz | REC | 2.3Vp-p |
|  | 25Hz | PLAY | 1.4Vp-p |
| ⑦ | 25Hz | REC | 3.4Vp-p |
|  | 25Hz | PLAY | 1.4Vp-p |
| ⑧ | 25Hz | PLAY | 4.4Vp-p |
| ⑨ | 25Hz | PLAY | 4Vp-p |
| ⑳ | 1500Hz | PLAY,REC | 0.2Vp-p |
| ㉑ | 625Hz | PLAY,REC | 0.1Vp-p |
| ㉕ | 25Hz | PLAY,REC | 0.2Vp-p |
| ㉖ | 25Hz | PLAY,REC | 5Vp-p |
| ㉗ | 25Hz | PLAY,REC | 5Vp-p |
| ㉚ | 25Hz | REC | 1.5Vp-p |
|  | 25Hz<br>13ms | PLAY | 2.5Vp-p |
| ㉜ | 25Hz<br>27ms | PLAY |  |
| ㉞ ㉟ | 25Hz | PLAY | 5Vp-p |
| ㊲ | 50Hz | PLAY,REC | 4.4Vp-p |


IC4201
Pin ③
40msec
5.0Vp-p
Pin ①
4.2Vp-p
18µsec
Pin ⑳
5.0Vp-p
18µsec
40msec
Pin ⑲
2.5Vp-p
Pin ⑱
4.2Vp-p
B4204 Collector
2.5Vp-p
34µsec
IC4201
Pin ⑫
40msec
5.0Vp-p
1.05msec
Pin ⑪
40msec
5.0Vp-p
0.39msec
Pin ⑦
3.5Vp-p
1.0V
Q4201 Collector
IC4201
PLAY MODE
STILL MODE
Pin ④
4.3V
Pin ⑨
1.5Vp-p
2.3sec
4.4msec
Pin ⑮
2.5Vp-p
Pin ⑯
4.4Vp-p
B4201 Collector
4.6Vp-p
160msec

VHR-2300EX

16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31

K

J

I

H

G

F

E

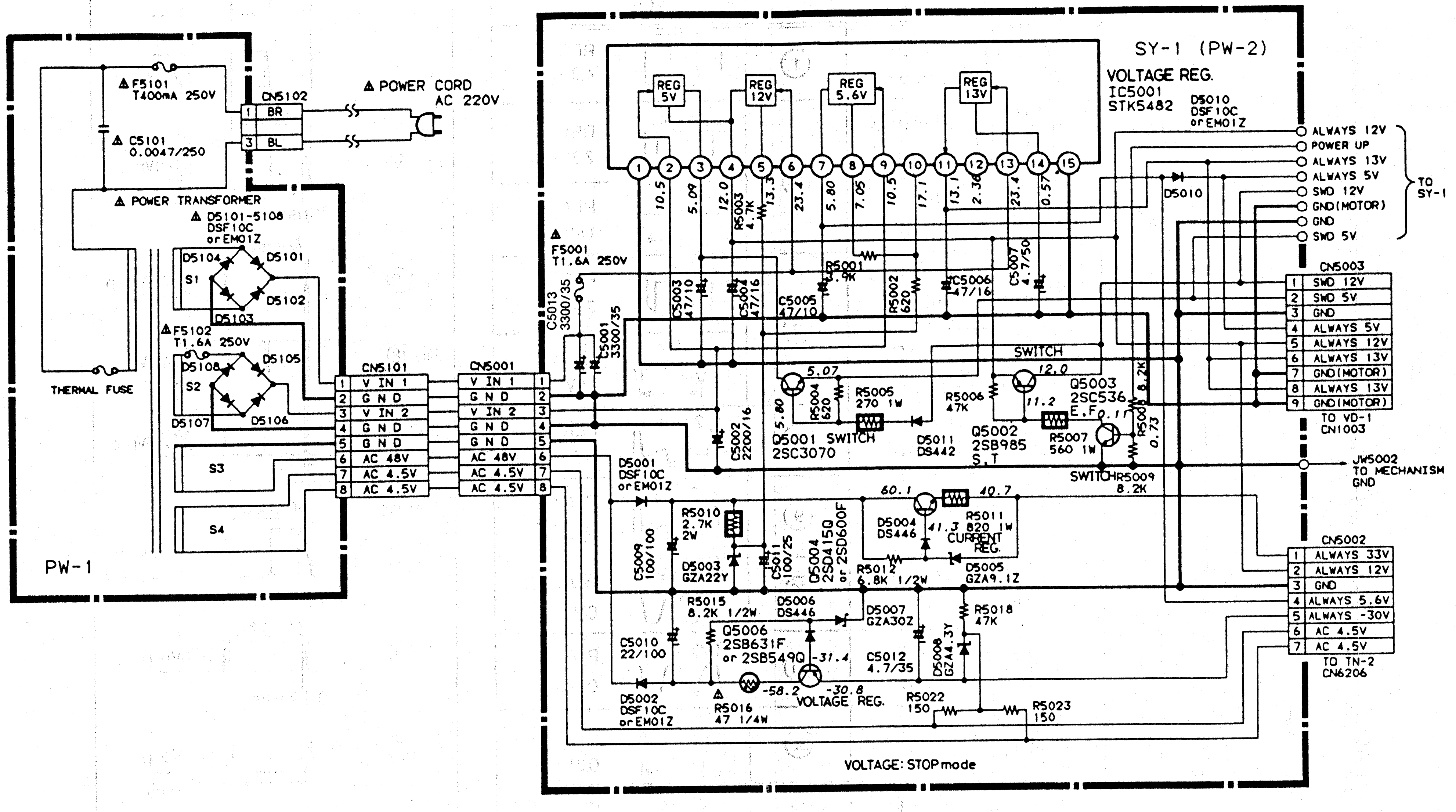
D

C

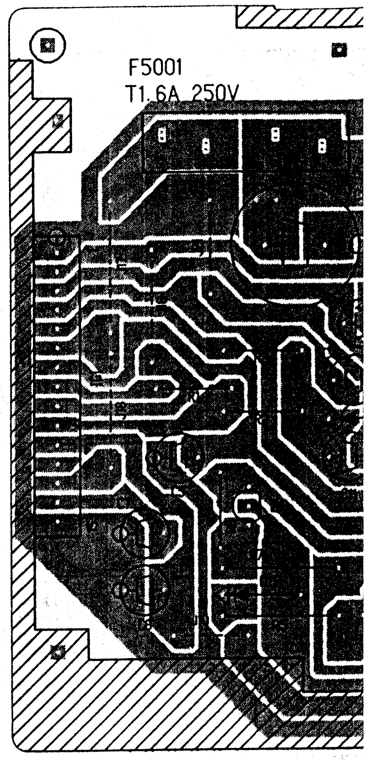
B

A

## P.C.B. PW-1, SY-1 POWER SUPPLY CIRCUIT DIAGRAM (PW-1 143-0-233V20971)
(SY-1 143-0-233V05904)

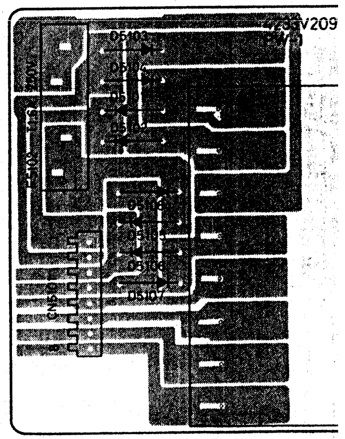


⚠ F5101 T400mA 250V
⚠ C5101 0.0047/250
CN5102
BR
BL
⚠ POWER CORD AC 220V
⚠ POWER TRANSFORMER
⚠ D5101-5108 DSF10C or EM01Z
D5101
D5102
D5103
D5104
D5105
D5106
D5107
D5108
S1
S2
S3
S4
⚠ F5102 T1.6A 250V
THERMAL FUSE
PW-1
CN5101
V IN 1
GND
V IN 2
GND
GND
AC 48V
AC 4.5V
AC 4.5V
CN5001
SY-1 (PW-2)
VOLTAGE REG.
IC5001 STK5482
D5010 DSF10C or EM01Z
REG 5V
REG 12V
REG 5.6V
REG 13V
10.5
5.09
12.0
13.3
23.4
5.80
7.05
10.5
17.1
13.1
2.36
23.4
0.57
⚠ F5001 T1.6A 250V
C5013 3300/35
C5001 3300/35
C5003 47/10
C5004 47/16
R5003 4.7K
C5005 47/10
R5001 2.2K
R5002 620
C5006 47/16
C5007 4.7/50
ALWAYS 12V
POWER UP
ALWAYS 13V
ALWAYS 5V
SWD 12V
GND (MOTOR)
GND
SWD 5V
TO SY-1
CN5003
SWD 12V
SWD 5V
GND
ALWAYS 5V
ALWAYS 12V
ALWAYS 13V
GND (MOTOR)
ALWAYS 13V
GND (MOTOR)
TO VD-1 CN1003
SWITCH
5.07
12.0
5.80
11.2
R5004 620
R5005 270 1W
R5006 47K
Q5003 2SC536 E.F
C5002 2200/16
Q5001 SWITCH 2SC3070
D5011 DS442
Q5002 2SB985 S.T
R5007 560 1W
R5008 8.2K
0.73
SWITCH R5009 8.2K
JW5002 TO MECHANISM GND
D5001 DSF10C or EM01Z
C5009 100/100
R5010 2.7K 2W
D5003 GZA22Y
C5011 100/25
D5004 2SD415Q or 2SD600F
60.1
40.7
D5004 DS446
41.3
R5011 820 1W
CURRENT REG.
R5012 6.8K 1/2W
D5005 GZA9.1Z
CN5002
ALWAYS 33V
ALWAYS 12V
GND
ALWAYS 5.6V
ALWAYS -30V
AC 4.5V
AC 4.5V
TO TN-2 CN6206
R5015 8.2K 1/2W
D5006 DS446
D5007 GZA30Z
R5018 47K
C5010 22/100
Q5006 2SB631F or 2SB549Q
-31.4
C5012 4.7/35
D5008 GZA4.3Y
-58.2
-30.8
VOLTAGE REG.
D5002 DSF10C or EM01Z
⚠ R5016 47 1/4W
R5022 150
R5023 150
VOLTAGE: STOP mode



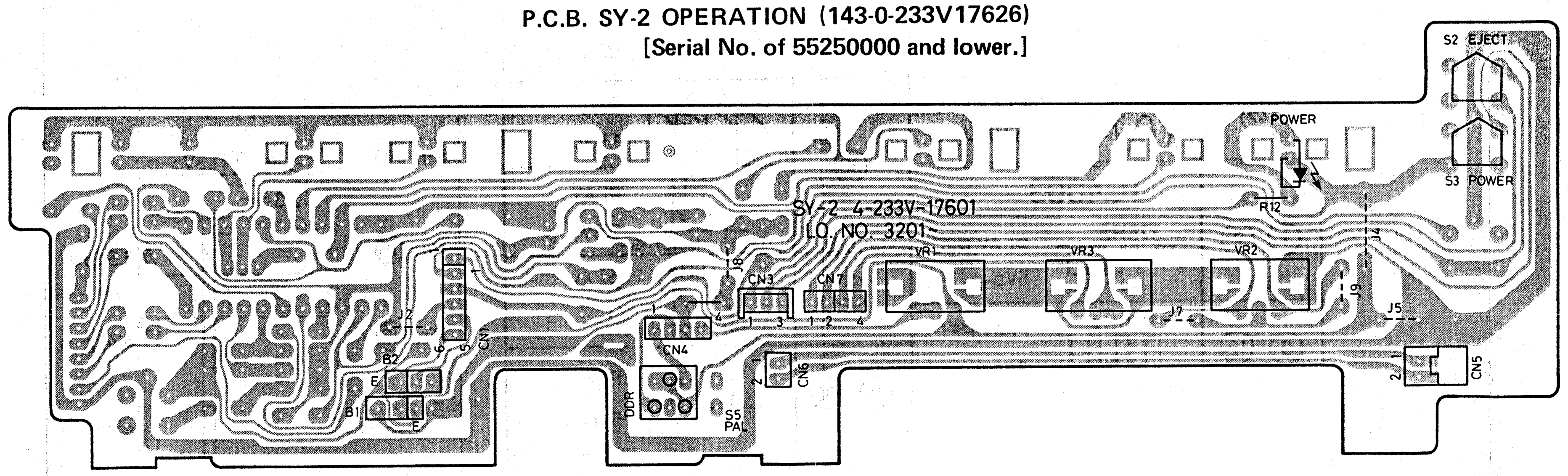
F5001
T1.6A 250V

**P.C.B. PW-1 POW**



**VHR-2300EX**

## P.C.B. SY-2 OPERATION (143-0-233V17626)
[Serial No. of 55250000 and lower.]

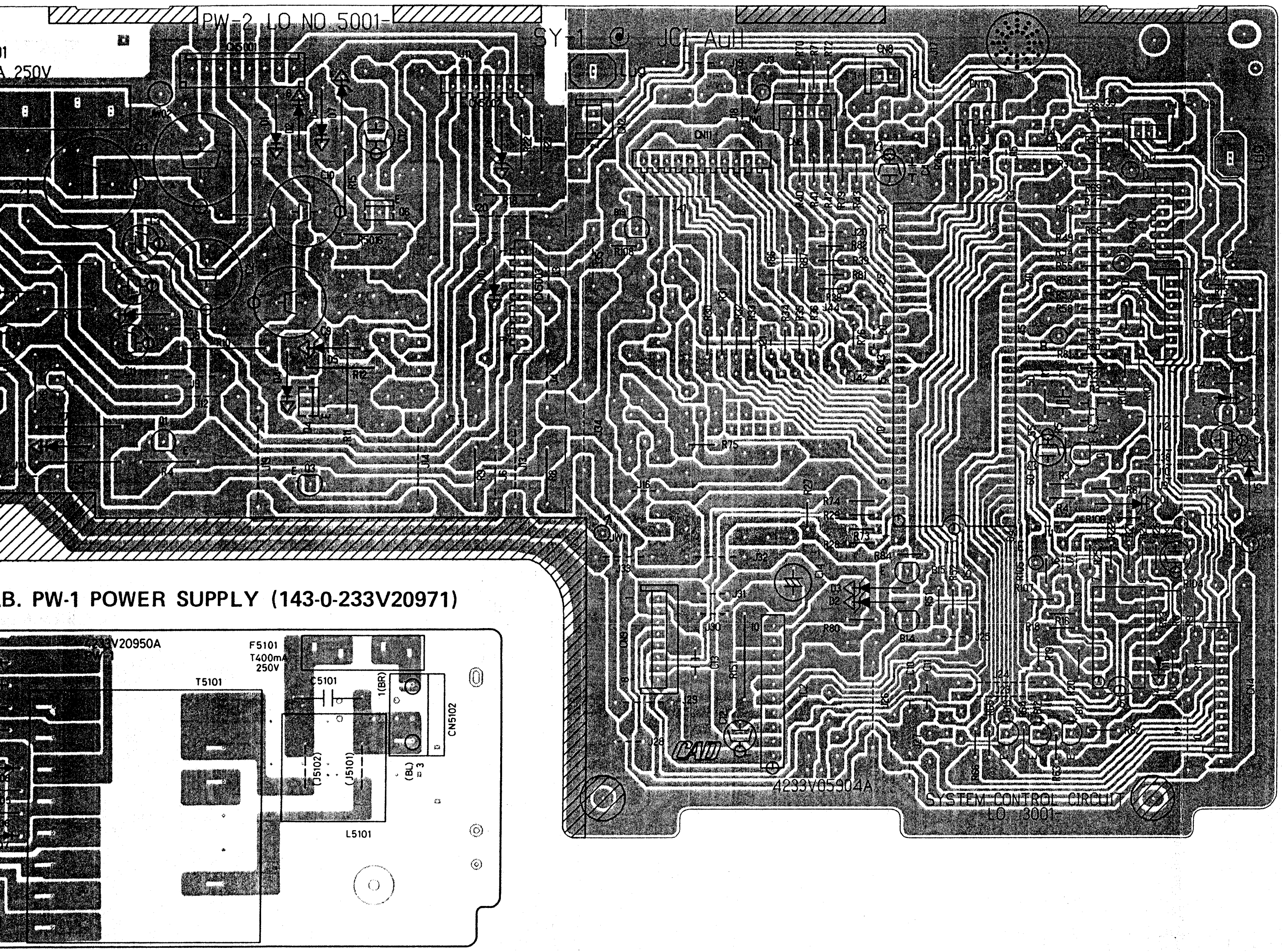


S2 EJECT
POWER
S3 POWER
SY-2 4-233V-17601
LO. NO. 3201
R12
VR1
VR3
VR2
J4
J5
J6
J7
J8
CN1
CN3
CN4
CN5
CN6
CN7
B1
B2
E
DDR
S5 PAL

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

8

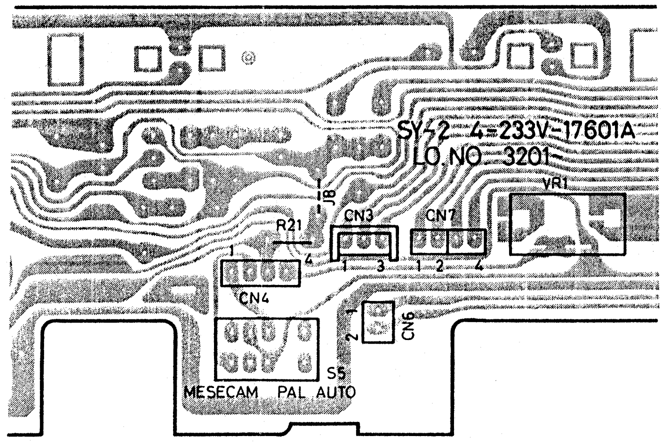
## P.C.B. SY-1 SYSTEM CONTROL & POWER SUPPLY (143-0-233V05904)



PW-2 LO NO 5001
SY-1
JC1-Au
A 250V
4233V05904A
SYSTEM CONTROL CIRCUIT
LO 3001
V20950A
F5101
T400mA
250V
T5101
C5101
1(BR)
CN5102
(J5102)
(J5101)
(BL)
3
L5101

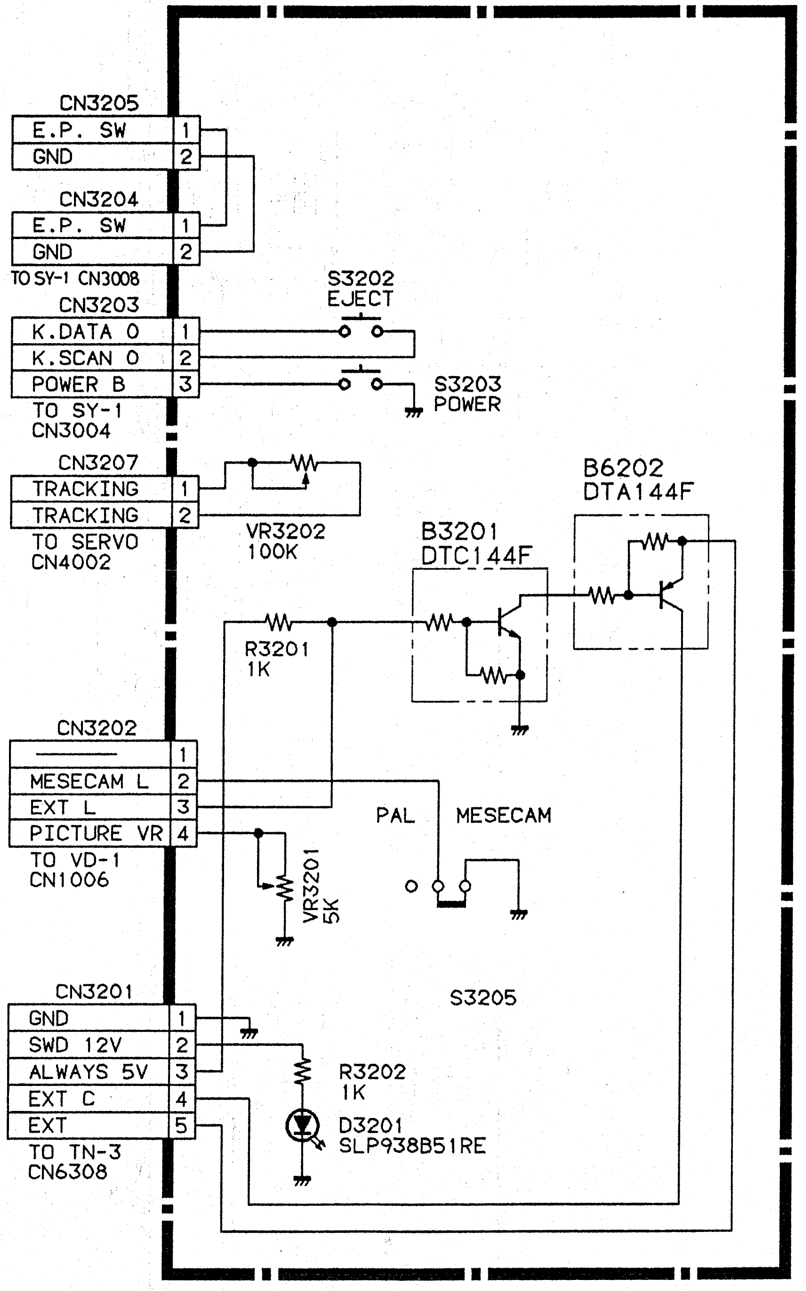
B. PW-1 POWER SUPPLY (143-0-233V20971)

## P.C.B. SY-2 OPERATION (143-0-233V17621)
**[Serial No. of 55250001 and higher.]**



SY-2 4=233V-17601A
LO.NO. 3201
J8
R21
CN3
CN7
VR1
CN4
CN6
S5
MESECAM
PAL
AUTO

## P.C.B. SY-2 OPERATION CIRCUIT BOARD (143-0-233V17626)
**[Serial No. of 55250000 and lower.]**

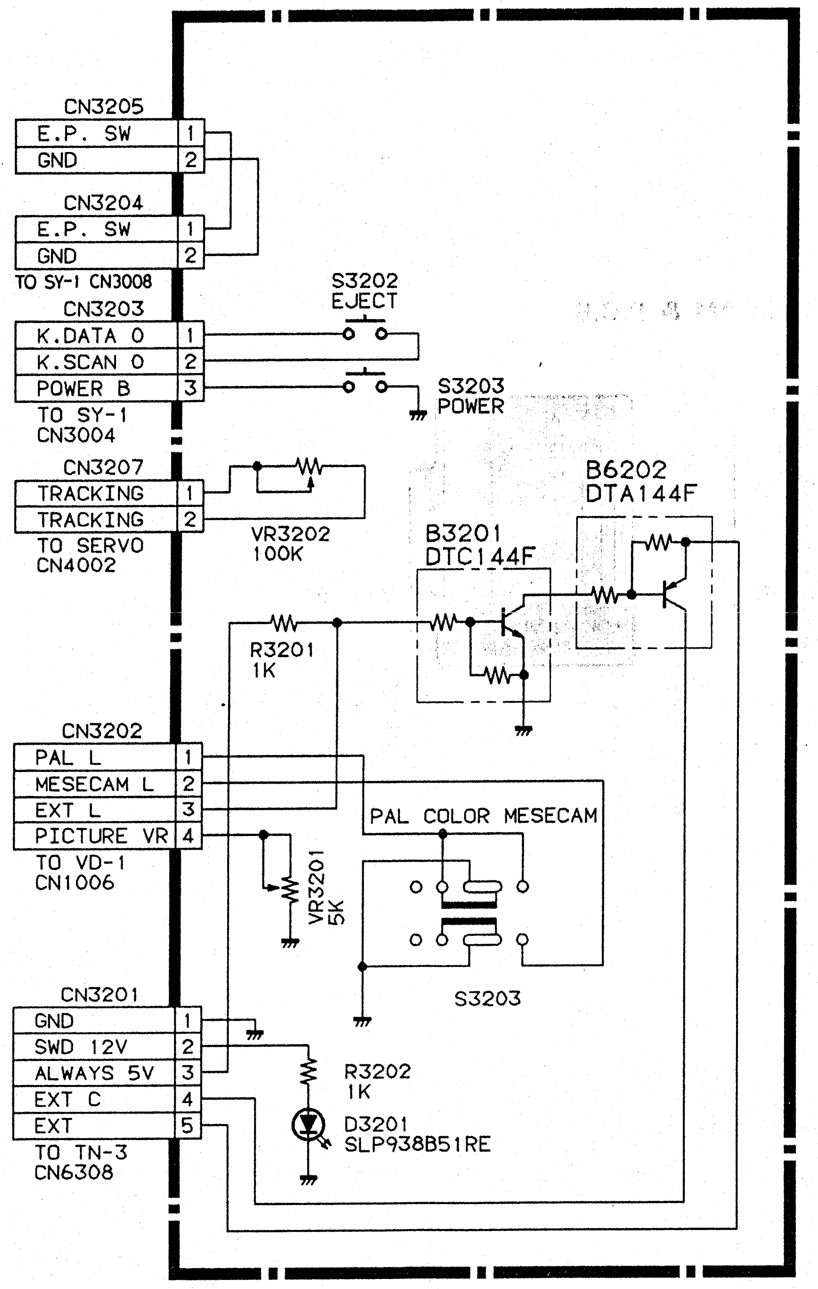


CN3205
E.P. SW 1
GND 2
CN3204
E.P. SW 1
GND 2
TO SY-1 CN3008
CN3203
K.DATA 0 1
K.SCAN 0 2
POWER B 3
TO SY-1
CN3004
S3202
EJECT
S3203
POWER
CN3207
TRACKING 1
TRACKING 2
TO SERVO
CN4002
VR3202
100K
B3201
DTC144F
B6202
DTA144F
R3201
1K
CN3202
1
MESECAM L 2
EXT L 3
PICTURE VR 4
TO VD-1
CN1006
VR3201
5K
PAL
MESECAM
S3205
CN3201
GND 1
SWD 12V 2
ALWAYS 5V 3
EXT C 4
EXT 5
TO TN-3
CN6308
R3202
1K
D3201
SLP938B51RE

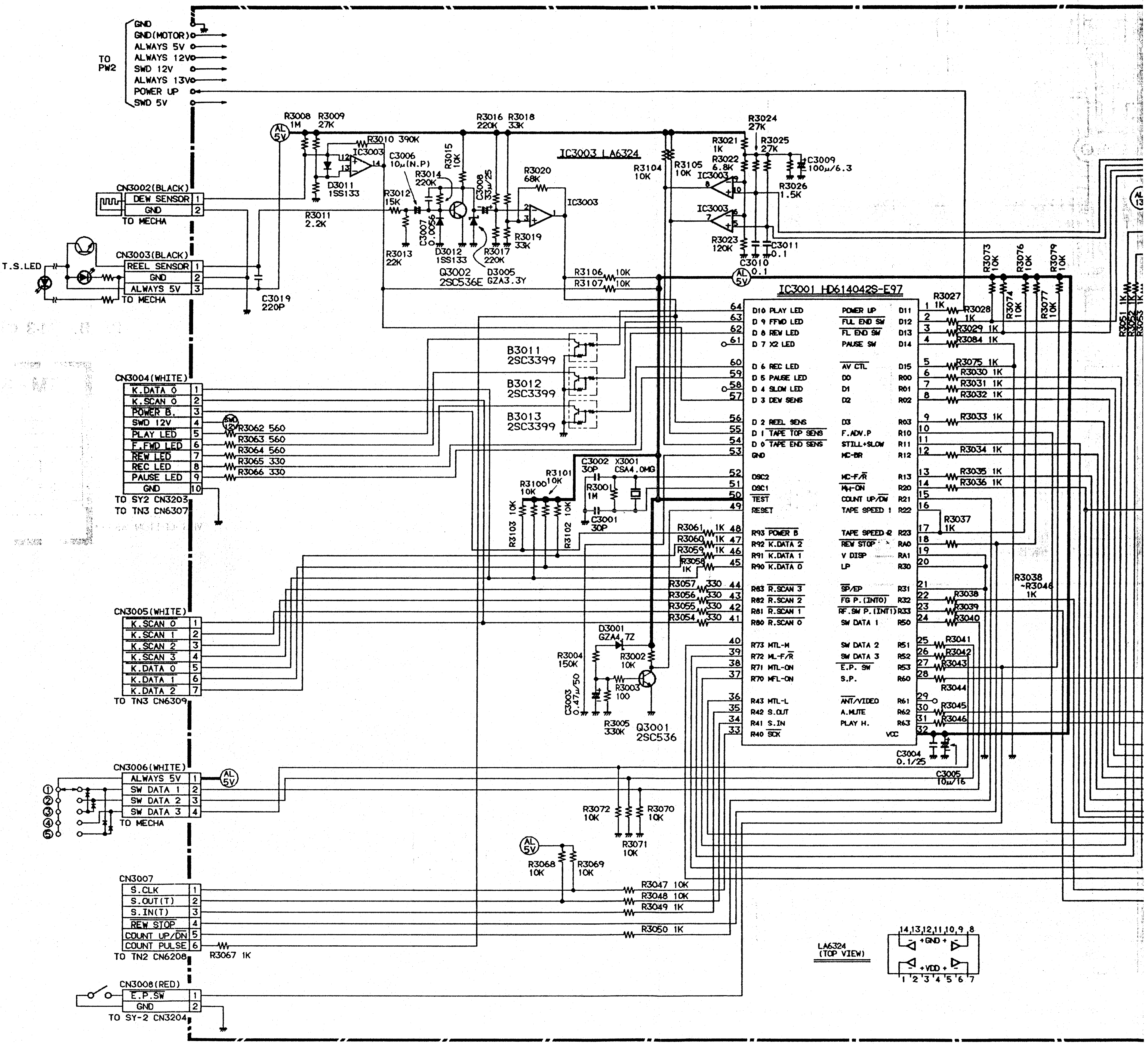
16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31

## P.C.B. SY-2 OPERATION CIRCUIT BOARD (143-0-233V17621)

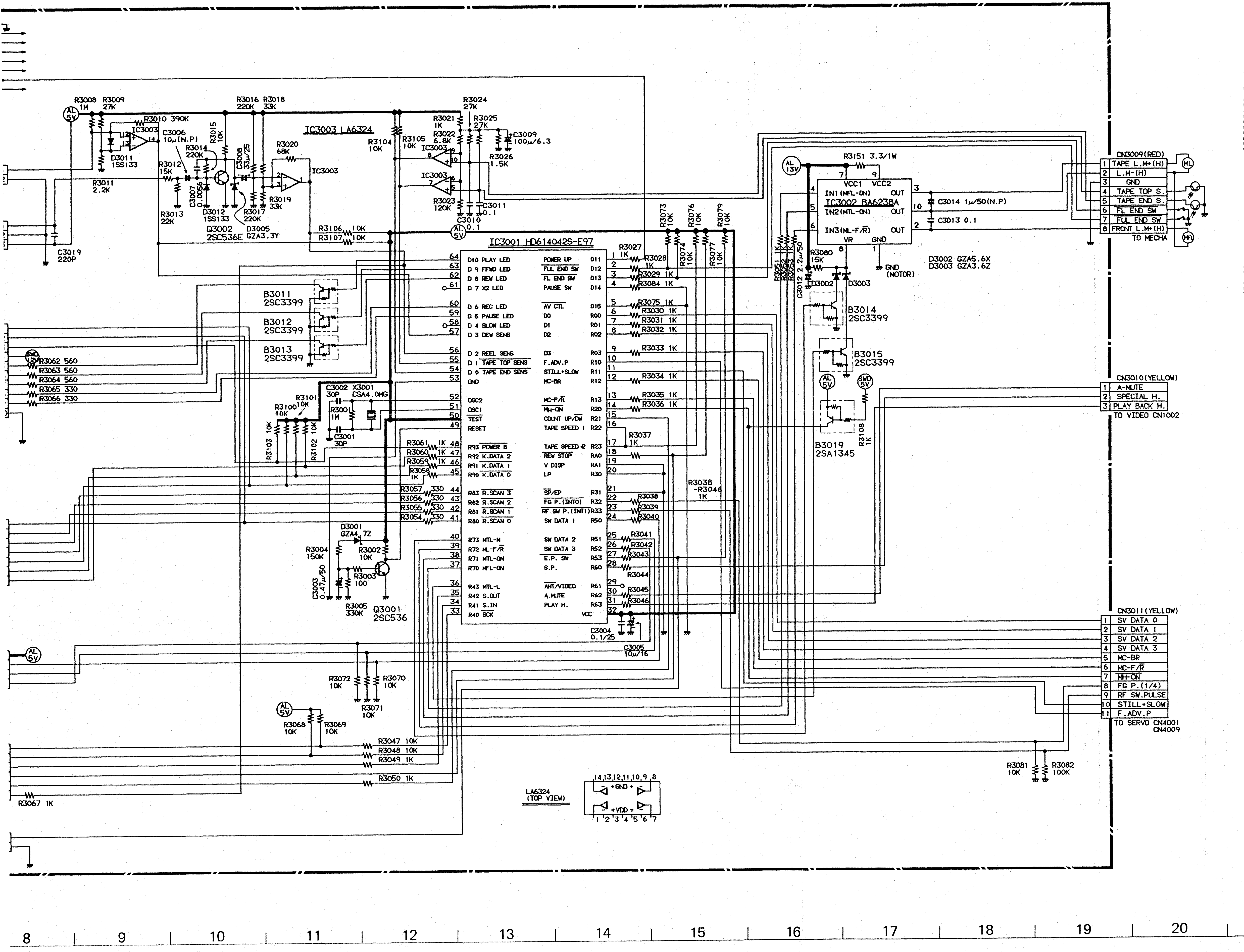
[Serial No. of 55250001 and higher.]


CN3205
E.P. SW 1
GND 2
CN3204
E.P. SW 1
GND 2
TO SY-1 CN3008
CN3203
K.DATA 0 1
K.SCAN 0 2
POWER B 3
TO SY-1 CN3004
S3202 EJECT
S3203 POWER
CN3207
TRACKING 1
TRACKING 2
TO SERVO CN4002
VR3202 100K
B3201 DTC144F
B6202 DTA144F
R3201 1K
CN3202
PAL L 1
MESECAM L 2
EXT L 3
PICTURE VR 4
TO VD-1 CN1006
VR3201 5K
PAL COLOR MESECAM
S3203
CN3201
GND 1
SWD 12V 2
ALWAYS 5V 3
EXT C 4
EXT 5
TO TN-3 CN6308
R3202 1K
D3201 SLP938B51RE

## P.C.B. SY-1 SYSTEM CONTROL CIRCUIT BOARD (143-0-233V


TO PW2
GND
GND(MOTOR)
ALWAYS 5V
ALWAYS 12V
SWD 12V
ALWAYS 13V
POWER UP
SWD 5V
CN3002(BLACK)
DEW SENSOR 1
GND 2
TO MECHA
T.S.LED
CN3003(BLACK)
REEL SENSOR 1
GND 2
ALWAYS 5V 3
TO MECHA
C3019 220P
CN3004(WHITE)
K.DATA 0 1
K.SCAN 0 2
POWER B. 3
SWD 12V 4
PLAY LED 5
F.FWD LED 6
REW LED 7
REC LED 8
PAUSE LED 9
GND 10
TO SY2 CN3203
TO TN3 CN6307
R3062 560
R3063 560
R3064 560
R3065 330
R3066 330
CN3005(WHITE)
K.SCAN 0 1
K.SCAN 1 2
K.SCAN 2 3
K.SCAN 3 4
K.DATA 0 5
K.DATA 1 6
K.DATA 2 7
TO TN3 CN6309
CN3006(WHITE)
ALWAYS 5V 1
SW DATA 1 2
SW DATA 2 3
SW DATA 3 4
TO MECHA
CN3007
S.CLK 1
S.OUT(T) 2
S.IN(T) 3
REW STOP 4
COUNT UP/DN 5
COUNT PULSE 6
TO TN2 CN6208
R3067 1K
CN3008(RED)
E.P.SW 1
GND 2
TO SY-2 CN3204
R3008 1M
R3009 27K
R3010 390K
IC3003
C3006 10μ(N.P)
D3011 1SS133
R3011 2.2K
R3012 15K
R3013 22K
R3014 220K
R3015 10K
C3007 0.0056
D3012 1SS133
Q3002 2SC536E
C3008 3.3μ/25
R3016 220K
R3018 33K
R3017 220K
D3005 GZA3.3Y
R3019 33K
R3020 68K
IC3003 LA6324
R3104 10K
R3105 10K
R3024 27K
R3021 1K
R3022 6.8K
R3025 27K
C3009 100μ/6.3
R3026 1.5K
R3023 120K
C3011 0.1
C3010 0.1
R3106 10K
R3107 10K
IC3001 HD614042S-E97
B3011 2SC3399
B3012 2SC3399
B3013 2SC3399
C3002 30P
X3001 CSA4.0MG
R3101 10K
R3100 10K
R3001 1M
C3001 30P
R3103 10K
R3102 10K
R3061 1K
R3060 1K
R3059 1K
R3058 1K
R3057 330
R3056 330
R3055 330
R3054 330
D3001 GZA4.7Z
R3004 150K
R3002 10K
R3003 100
C3003 0.47μ/50
R3005 330K
Q3001 2SC536
D10 PLAY LED
D 9 FFWD LED
D 8 REW LED
D 7 X2 LED
D 6 REC LED
D 5 PAUSE LED
D 4 SLOW LED
D 3 DEW SENS
D 2 REEL SENS
D 1 TAPE TOP SENS
D 0 TAPE END SENS
GND
OSC2
OSC1
TEST
RESET
R93 POWER B
R92 K.DATA 2
R91 K.DATA 1
R90 K.DATA 0
R83 R.SCAN 3
R82 R.SCAN 2
R81 R.SCAN 1
R80 R.SCAN 0
R73 MTL-H
R72 ML-F/R
R71 MTL-ON
R70 MFL-ON
R43 MTL-L
R42 S.OUT
R41 S.IN
R40 SCK
POWER UP D11
FUL END SW D12
FL END SW D13
PAUSE SW D14
AV CTL D15
D0 R00
D1 R01
D2 R02
D3 R03
F.ADV.P R10
STILL+SLOW R11
MC-BR R12
MC-F/R R13
MH-ON R20
COUNT UP/DN R21
TAPE SPEED 1 R22
TAPE SPEED 2 R23
REW STOP RA0
V DISP RA1
LP R30
SP/EP R31
FG P.(INT0) R32
RF.SW P.(INT1) R33
SW DATA 1 R50
SW DATA 2 R51
SW DATA 3 R52
E.P. SW R53
S.P. R60
ANT/VIDEO R61
A.MUTE R62
PLAY H. R63
VCC
R3027 1K
R3028
R3029 1K
R3084 1K
R3075 1K
R3030 1K
R3031 1K
R3032 1K
R3033 1K
R3034 1K
R3035 1K
R3036 1K
R3037 1K
R3038 -R3046 1K
R3038
R3039
R3040
R3041
R3042
R3043
R3044
R3045
R3046
C3004 0.1/25
C3005 10μ/16
R3073 10K
R3074 10K
R3076 10K
R3077 10K
R3079 10K
R3072 10K
R3070 10K
R3071 10K
R3068 10K
R3069 10K
R3047 10K
R3048 10K
R3049 1K
R3050 1K
LA6324 (TOP VIEW)
14 13 12 11 10 9 8
+GND+
+VDD+
1 2 3 4 5 6 7
AL 5V
K
J
I
H
G
F
E
D
C
B
A
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

## P.C.B. SY-1 SYSTEM CONTROL CIRCUIT BOARD (143-0-233V05904)


IC3001 HD614042S-E97
D10 PLAY LED
D 9 FFWD LED
D 8 REW LED
D 7 X2 LED
D 6 REC LED
D 5 PAUSE LED
D 4 SLOW LED
D 3 DEW SENS
D 2 REEL SENS
D 1 TAPE TOP SENS
D 0 TAPE END SENS
GND
OSC2
OSC1
TEST
RESET
R93 POWER B
R92 K.DATA 2
R91 K.DATA 1
R90 K.DATA 0
R83 R.SCAN 3
R82 R.SCAN 2
R81 R.SCAN 1
R80 R.SCAN 0
R73 MTL-M
R72 ML-F/R
R71 MTL-ON
R70 MFL-ON
R43 MTL-L
R42 S.OUT
R41 S.IN
R40 SCK
POWER UP D11
FUL END SW D12
FL END SW D13
PAUSE SW D14
AV CTL D15
D0 R00
D1 R01
D2 R02
D3 R03
F.ADV.P R10
STILL+SLOW R11
MC-BR R12
MC-F/R R13
MH-ON R20
COUNT UP/DW R21
TAPE SPEED 1 R22
TAPE SPEED 2 R23
REW STOP RA0
V DISP RA1
LP R30
SP/EP R31
FG P.(INT0) R32
RF.SW P.(INT1) R33
SW DATA 1 R50
SW DATA 2 R51
SW DATA 3 R52
E.P. SW R53
S.P. R60
ANT/VIDEO R61
A.MUTE R62
PLAY H. R63
VCC
IC3003 LA6324
IC3002 BA6238A
VCC1 VCC2
IN1 (MFL-ON) OUT
IN2 (MTL-ON) OUT
IN3 (ML-F/R) OUT
VR GND
GND (MOTOR)
R3151 3.3/1W
R3080 15K
C3014 1μ/50(N.P)
C3013 0.1
C3012 2.2μ/50
R3051 1K
R3052 1K
R3053 1K
D3002 GZA5.6X
D3003 GZA3.6Z
B3014 2SC3399
B3015 2SC3399
B3019 2SA1345
R3108 1K
B3011 2SC3399
B3012 2SC3399
B3013 2SC3399
AL 5V
AL 13V
SW 5V
CN3009(RED)
1 TAPE L.M+(H)
2 L.M-(H)
3 GND
4 TAPE TOP S.
5 TAPE END S.
6 FL END SW
7 FUL END SW
8 FRONT L.M+(H)
TO MECHA
ML
MFL
CN3010(YELLOW)
1 A-MUTE
2 SPECIAL H.
3 PLAY BACK H.
TO VIDEO CN1002
CN3011(YELLOW)
1 SV DATA 0
2 SV DATA 1
3 SV DATA 2
4 SV DATA 3
5 MC-BR
6 MC-F/R
7 MH-ON
8 FG P.(1/4)
9 RF SW.PULSE
10 STILL+SLOW
11 F.ADV.P
TO SERVO CN4001
CN4009
R3008 1M
R3009 27K
R3010 390K
C3006 10μ(N.P)
D3011 1SS133
R3011 2.2K
R3012 15K
R3013 22K
C3007 0.0056
R3014 220K
R3015 10K
D3012 1SS133
Q3002 2SC536E
R3016 220K
R3018 33K
C3008 3.3μ/25
R3017 220K
D3005 GZA3.3Y
R3019 33K
R3020 68K
C3019 220P
R3024 27K
R3021 1K
R3025 27K
R3022 6.8K
C3009 100μ/6.3
R3026 1.5K
R3023 120K
C3010 0.1
C3011 0.1
R3104 10K
R3105 10K
R3106 10K
R3107 10K
R3062 560
R3063 560
R3064 560
R3065 330
R3066 330
R3100 10K
R3101 10K
R3103 10K
R3102 10K
C3002 30P
X3001 CSA4.0MG
R3001 1M
C3001 30P
R3061 1K
R3060 1K
R3059 1K
R3058 1K
R3057 330
R3056 330
R3055 330
R3054 330
D3001 GZA4.7Z
R3004 150K
R3002 10K
R3003 100
C3003 0.47μ/50
R3005 330K
Q3001 2SC536
R3027 1K
R3028 1K
R3029 1K
R3084 1K
R3073 10K
R3074 10K
R3076 10K
R3077 10K
R3079 10K
R3075 1K
R3030 1K
R3031 1K
R3032 1K
R3033 1K
R3034 1K
R3035 1K
R3036 1K
R3037 1K
R3038 ~R3046 1K
C3004 0.1/25
C3005 10μ/16
R3072 10K
R3070 10K
R3071 10K
R3068 10K
R3069 10K
R3047 10K
R3048 10K
R3049 1K
R3050 1K
R3067 1K
R3081 10K
R3082 100K
LA6324 (TOP VIEW)
14 13 12 11 10 9 8
+GND+
+VDD+
1 2 3 4 5 6 7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

MODE DETECT SWITCH

| CN3006 | SW1<br>2 | SW2<br>3 | SW3<br>4 | HEX |
|---|---|---|---|---|
| STOP | 1 | 0 | 0 | 1 |
| FF/REW | 0 | 1 | 0 | 2 |
| PAUSE | 1 | 1 | 0 | 3 |
| RVW | 0 | 0 | 1 | 4 |
| PB/REC/FCUE | 1 | 0 | 1 | 5 |

SERVO INTERFACE

| MODE | D3 | D2 | D1 | D0 | HEX |
|---|---|---|---|---|---|
| STILL/SLOW/F.ADV | 0 | 0 | 0 | 0 | 0 |
| REC/REC-EDIT | 0 | 1 | 0 | 0 | 4 |
| P.SHORT-RVW/PAUSE | 0 | 1 | 0 | 1 | 5 |
| MC EP*9(T.UL) | 1 | 0 | 0 | 0 | 8 |
| PB (TL T.UL ETC) | 0 | 1 | 1 | 0 | 6 |
| SEARCH (CUE RVW ETC) | 1 | 0 | 1 | 1 | B |
| MC EP*25(FF REW ETC) | 1 | 1 | 0 | 0 | C |
| MC EP*15(T.UL ETC) | 1 | 1 | 0 | 1 | D |
| MC EP*3(TL ETC) | 1 | 1 | 1 | 0 | E |
| STOP/FL/F.UL/C-OUT) | 1 | 1 | 1 | 1 | F |

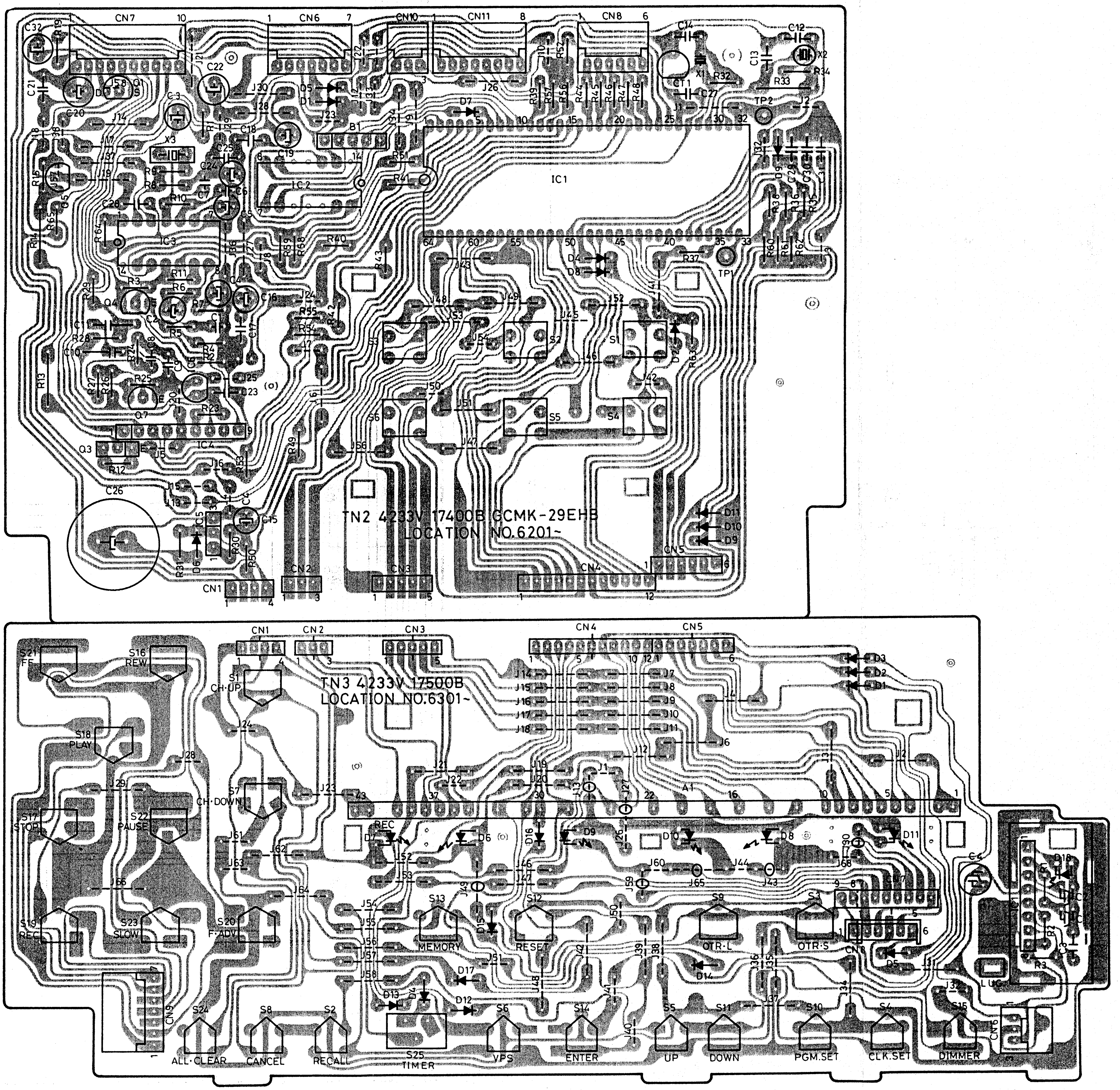
KEY MATRIX

|  | K.DATA 0 | K.DATA 1 | K.DATA 2 |
|---|---|---|---|
| K.SCAN 0 | EJECT B. | STOP B. | ANT.VIDEO B. |
| K.SCAN 1 | FF B. | PLAY B. |  |
| K.SCAN 2 | PAUSE B. | REC B. |  |
| K.SCAN 3 |  | F.ADV B. | REW B. |

❶

**VHR-2300EX**

## P.C.B. TN-2 TIMER & TUNING CONTROL (143-0-233V17421)
## P.C.B. TN-3 DISPLAY & OPERATION-2 (143-0-233V17521)



CN7
CN6
CN10
CN11
CN8
IC1
IC2
IC3
IC4
X1
X2
X3
TP1
TP2
S1
S2
S3
S4
S5
S6
D9
D10
D11
CN1
CN2
CN3
CN4
CN5
TN2 4233V 17400B GCMK-29EHB
LOCATION NO.6201~
TN3 4233V 17500B
LOCATION NO.6301~
S21 FF
S16 REW
S1 CH·UP
S18 PLAY
S7 CH·DOWN
S17 STOP
S22 PAUSE
S19 REC
S23 SLOW
S20 F·ADV
S13 MEMORY
S12 RESET
S9 OTR·L
S3 OTR·S
S24 ALL·CLEAR
S8 CANCEL
S2 RECALL
S25 TIMER
S6 VPS
S14 ENTER
S5 UP
S11 DOWN
S10 PGM.SET
S4 CLK.SET
S15 DIMMER
A1
D1
D2
D3
REC
CN9
CN6

K
J
I
H
G
F
E
D
C
B
A

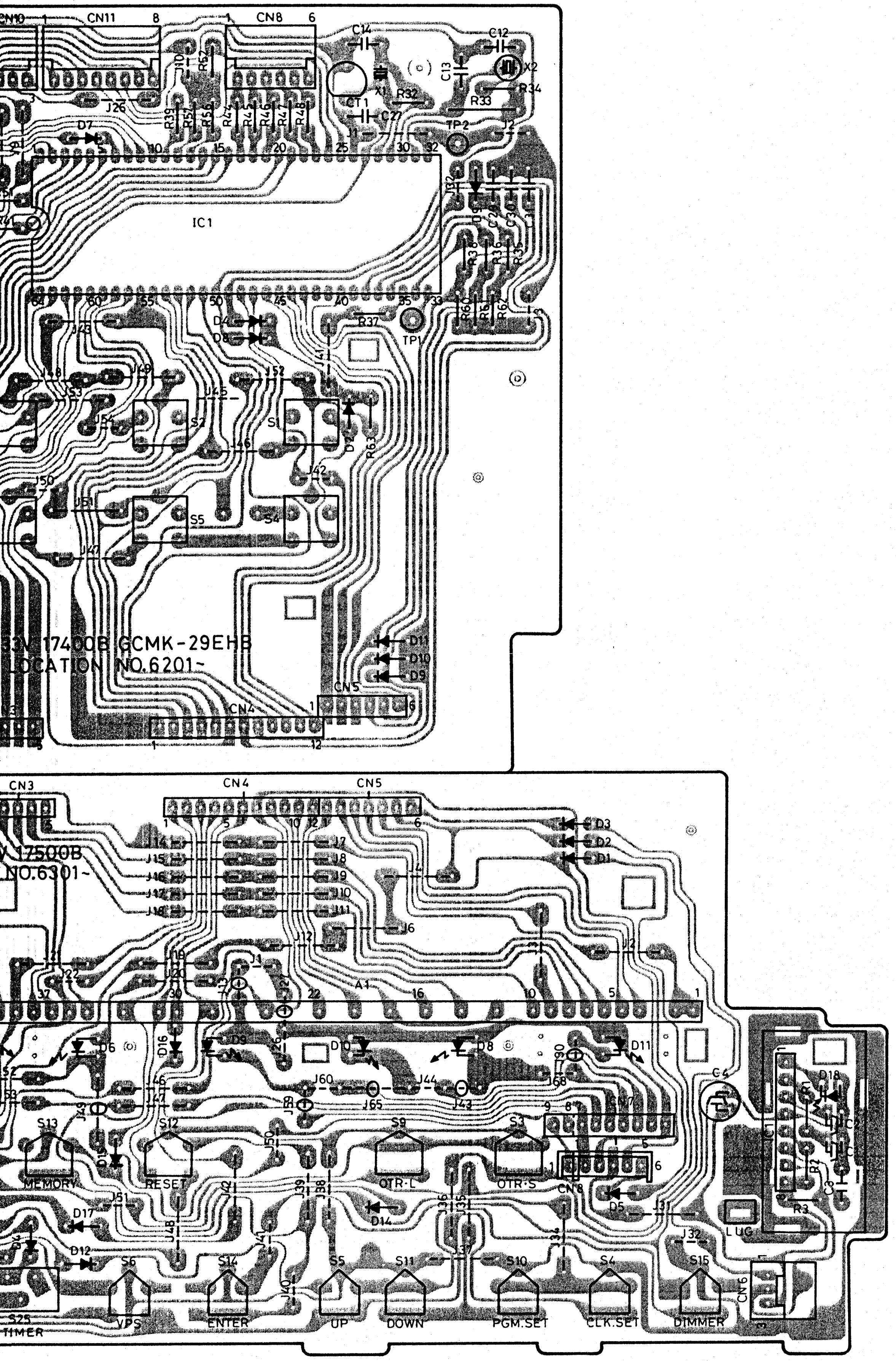
**VHR-2300EX**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

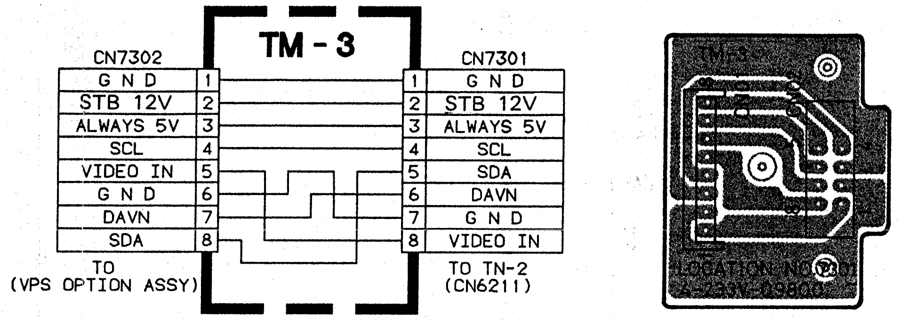
(VPS C

10

NG CONTROL (143-0-233V17421)
ERATION-2 (143-0-233V17521)

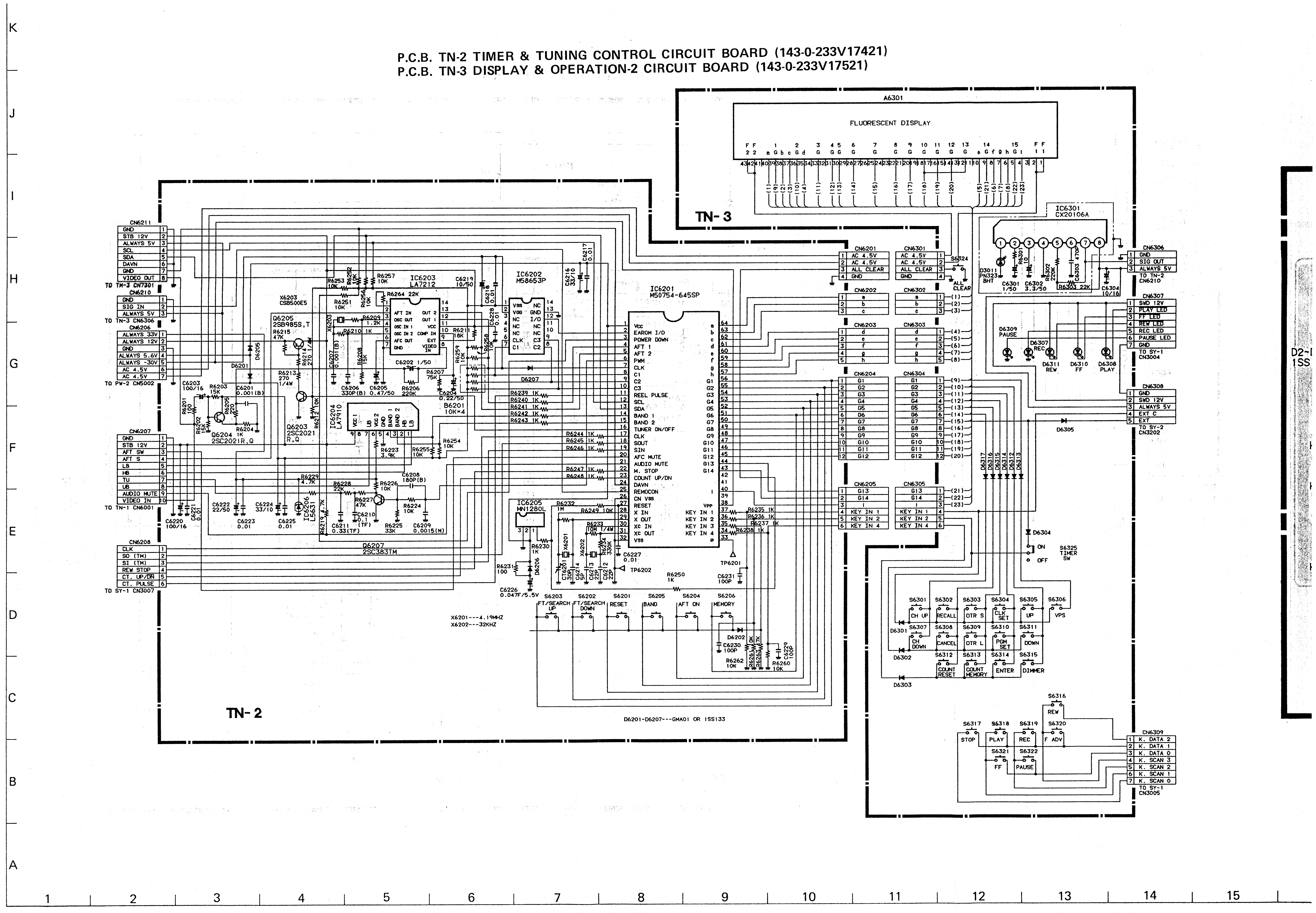

CN10
CN11
CN8
C14
C12
C13
X1
X2
R32
R33
R34
CT1
C27
TP2
J26
D7
IC1
R37
TP1
D4
D5
J52
J45
S1
S2
S3
S4
S5
J50
J51
J47
D11
D10
D9
233V17400B GCMK-29EHB
LOCATION NO.6201-
CN5
CN4
CN3
V 17500B
NO.6301-
D3
D2
D1
A1
D6
D16
D8
D10
D11
C4
D18
S13
S12
S9
S3
MEMORY
RESET
OTR-L
OTR-S
CN7
D5
D14
D17
D12
LUG
J32
S6
S17
S5
S11
S10
S4
S15
CN6
S25
TIMER
VPS
ENTER
UP
DOWN
PGM.SET
CLK.SET
DIMMER

## P.C.B. TM-3 CIRCUIT DIAGRAM & P.C.B.

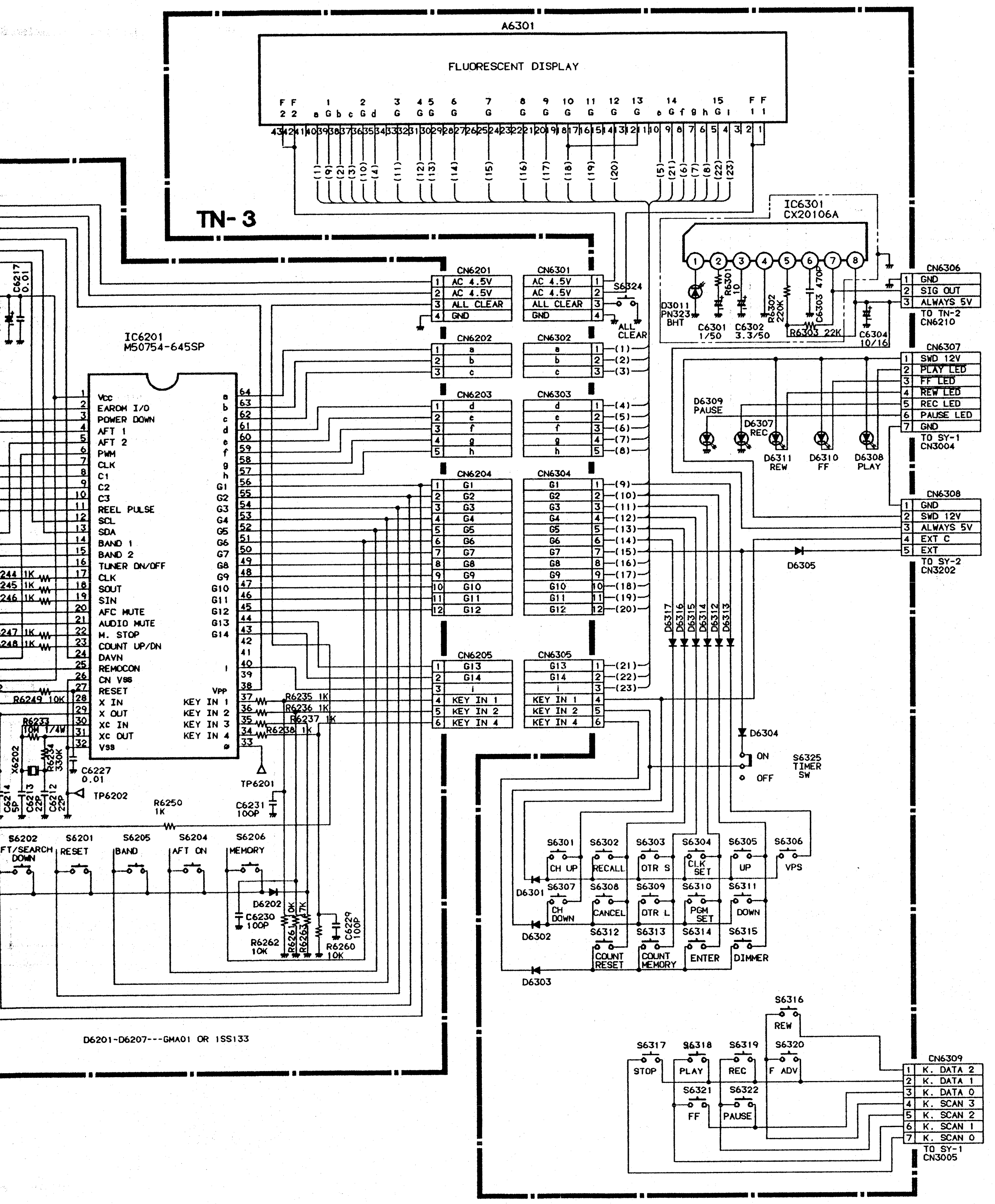

TM - 3
CN7302
1 G N D
2 STB 12V
3 ALWAYS 5V
4 SCL
5 VIDEO IN
6 G N D
7 DAVN
8 SDA
TO
(VPS OPTION ASSY)
CN7301
1 G N D
2 STB 12V
3 ALWAYS 5V
4 SCL
5 SDA
6 DAVN
7 G N D
8 VIDEO IN
TO TN-2
(CN6211)
TM-3
LOCATION NO.7301
A-233V-09800

9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

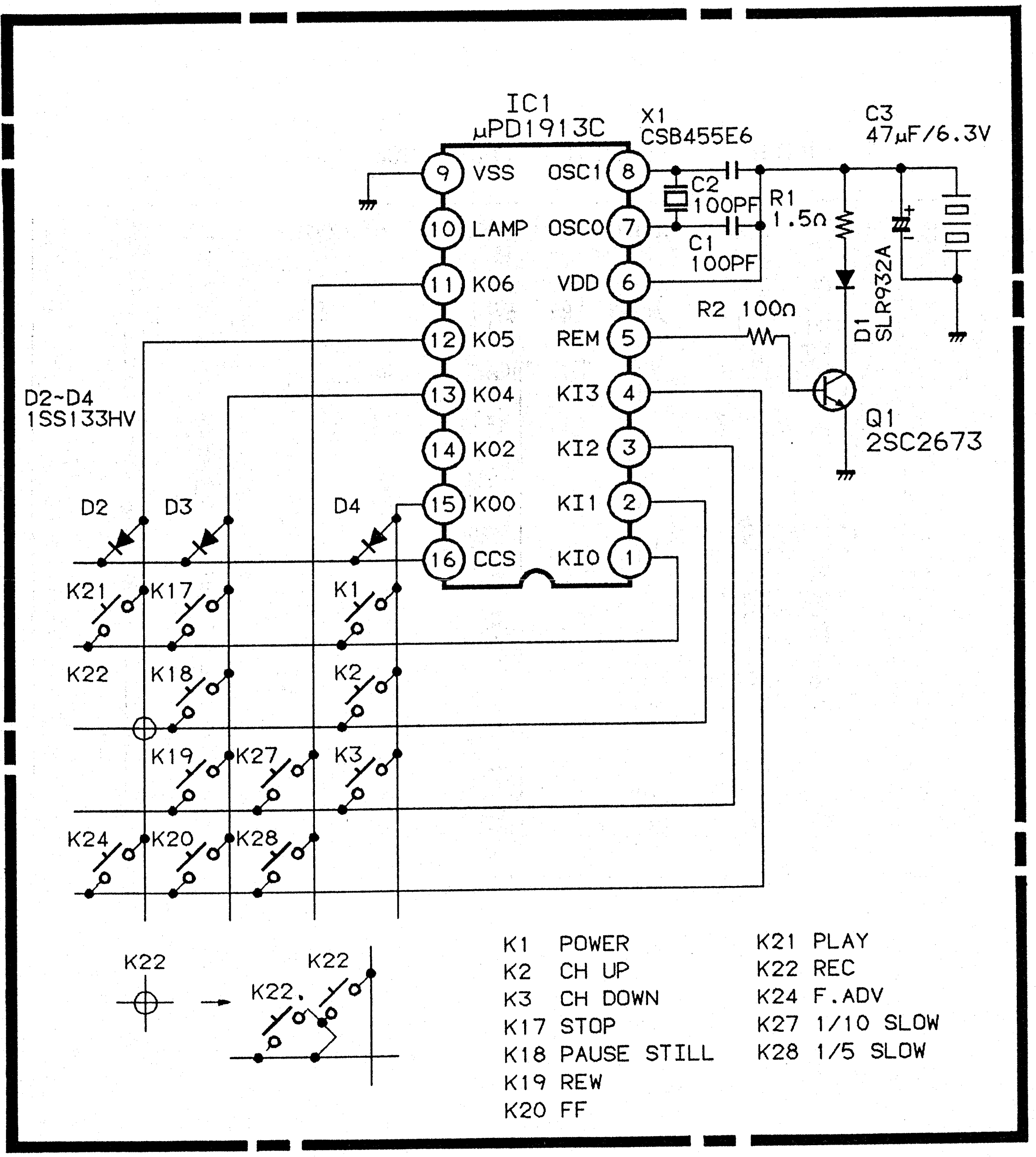
# P.C.B. TN-2 TIMER & TUNING CONTROL CIRCUIT BOARD (143-0-233V17421)
# P.C.B. TN-3 DISPLAY & OPERATION-2 CIRCUIT BOARD (143-0-233V17521)


K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
TN-2
TN-3
A6301
FLUORESCENT DISPLAY
IC6201
M50754-645SP
IC6202
M58653P
IC6203
LA7212
IC6204
LA7910
IC6205
MN1280L
IC6301
CX20106A
CN6211
TO TN-3 CN7301
CN6210
TO TN-3 CN6306
CN6206
TO PW-2 CN5002
CN6207
TO TN-1 CN6001
CN6208
TO SY-1 CN3007
CN6201
CN6202
CN6203
CN6204
CN6205
CN6301
CN6302
CN6303
CN6304
CN6305
CN6306
TO TN-2 CN6210
CN6307
TO SY-1 CN3004
CN6308
TO SY-2 CN3202
CN6309
TO SY-1 CN3005
Q6203
2SC2021
Q6204
2SC2021R,Q
Q6205
2SB985S,T
Q6207
2SC383TM
X6203
CSB500E5
X6201---4.19MHZ
X6202---32KHZ
D6201-D6207---GMA01 OR 1SS133
S6201 RESET
S6202 FT/SEARCH DOWN
S6203 FT/SEARCH UP
S6204 AFT ON
S6205 BAND
S6206 MEMORY
S6301 CH UP
S6302 RECALL
S6303 OTR S
S6304 CLK SET
S6305 UP
S6306 VPS
S6307 CH DOWN
S6308 CANCEL
S6309 OTR L
S6310 PGM SET
S6311 DOWN
S6312 COUNT RESET
S6313 COUNT MEMORY
S6314 ENTER
S6315 DIMMER
S6316 REW
S6317 STOP
S6318 PLAY
S6319 REC
S6320 F ADV
S6321 FF
S6322 PAUSE
S6324 ALL CLEAR
S6325 TIMER SW
ON
OFF
D6307 REC
D6308 PLAY
D6309 PAUSE
D6310 FF
D6311 REW
D3011 PN323 BHT

## IG CONTROL CIRCUIT BOARD (143-0-233V17421)
## RATION-2 CIRCUIT BOARD (143-0-233V17521)


A6301
FLUORESCENT DISPLAY
TN-3
IC6201
M50754-645SP
Vcc
EAROM I/O
POWER DOWN
AFT 1
AFT 2
PWM
CLK
C1
C2
C3
REEL PULSE
SCL
SDA
BAND 1
BAND 2
TUNER ON/OFF
CLK
SOUT
SIN
AFC MUTE
AUDIO MUTE
M. STOP
COUNT UP/DN
DAVN
REMOCON
CN V88
RESET
X IN
X OUT
Xc IN
Xc OUT
VSS
KEY IN 1
KEY IN 2
KEY IN 3
KEY IN 4
VPP
IC6301
CX20106A
CN6201
CN6301
AC 4.5V
ALL CLEAR
GND
S6324
ALL CLEAR
CN6202
CN6302
CN6203
CN6303
CN6204
CN6304
CN6205
CN6305
G1
G2
G3
G4
G5
G6
G7
G8
G9
G10
G11
G12
G13
G14
D3011
PN323
BHT
C6301
1/50
C6302
3.3/50
R6303 22K
C6304
10/16
CN6306
GND
SIG OUT
ALWAYS 5V
TO TN-2
CN6210
CN6307
SWD 12V
PLAY LED
FF LED
REW LED
REC LED
PAUSE LED
GND
TO SY-1
CN3004
D6309
PAUSE
D6307
REC
D6311
REW
D6310
FF
D6308
PLAY
CN6308
GND
SWD 12V
ALWAYS 5V
EXT C
EXT
TO SY-2
CN3202
D6305
D6317
D6316
D6315
D6314
D6312
D6313
D6304
ON
OFF
S6325
TIMER
SW
R6235 1K
R6236 1K
R6237 1K
R6238 1K
R6249 10K
R6233
10M 1/4W
X6202
C6227
0.01
TP6202
R6250
1K
TP6201
C6231
100P
C6217
0.01
S6202
FT/SEARCH
DOWN
S6201
RESET
S6205
BAND
S6204
AFT ON
S6206
MEMORY
D6202
C6230
100P
R6262
10K
R6260
10K
C6229
100P
S6301
CH UP
S6302
RECALL
S6303
OTR S
S6304
CLK SET
S6305
UP
S6306
VPS
S6307
CH DOWN
S6308
CANCEL
S6309
OTR L
S6310
PGM SET
S6311
DOWN
S6312
COUNT RESET
S6313
COUNT MEMORY
S6314
ENTER
S6315
DIMMER
D6301
D6302
D6303
S6316
REW
S6317
STOP
S6318
PLAY
S6319
REC
S6320
F ADV
S6321
FF
S6322
PAUSE
CN6309
K. DATA 2
K. DATA 1
K. DATA 0
K. SCAN 3
K. SCAN 2
K. SCAN 1
K. SCAN 0
TO SY-1
CN3005
D6201-D6207---GMA01 OR 1SS133

## IR REMOTE CONTROL CIRCUIT DIAGRAM (143-9-4100-64480)


IC1
μPD1913C
X1
CSB455E6
C3
47μF/6.3V
VSS
LAMP
K06
K05
K04
K02
K00
CCS
OSC1
OSCO
VDD
REM
KI3
KI2
KI1
KI0
C2
100PF
C1
100PF
R1
1.5Ω
R2 100Ω
D1
SLR932A
Q1
2SC2673
D2~D4
1SS133HV
D2
D3
D4
K21
K17
K1
K22
K18
K2
K19
K27
K3
K24
K20
K28
K22
K22
K22.

K1 POWER
K2 CH UP
K3 CH DOWN
K17 STOP
K18 PAUSE STILL
K19 REW
K20 FF

K21 PLAY
K22 REC
K24 F.ADV
K27 1/10 SLOW
K28 1/5 SLOW

K

VHR-2300EX

8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

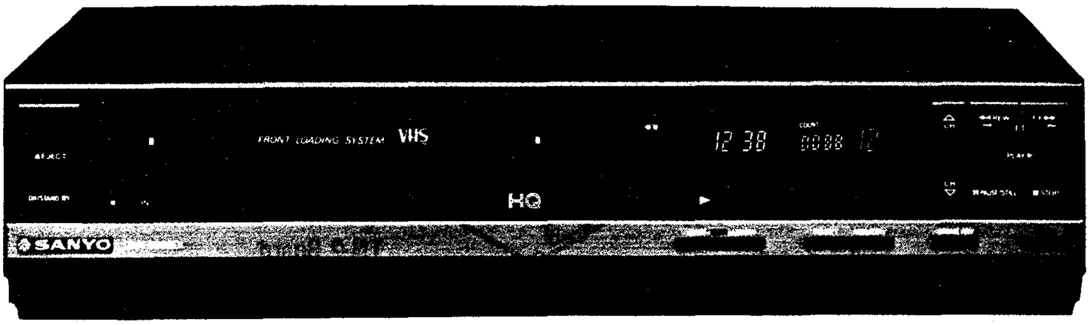
# SERVICE MANUAL

SANYO

## COLOUR VIDEO
## CASSETTE RECORDER

# VHR-2300

VHS PAL HQ


EJECT
FRONT LOADING SYSTEM VHS
12 38
HQ
SANYO

## TABLE OF CONTENTS

Page

1. LOCATION OF THE MAIN BOARD ........................................1
2. ELECTRICAL ADJUSTMENT ........................................2~6

**PA2P series**

**Reference No. WM-18678**

# 1. LOCATION OF THE MAIN BOARDS

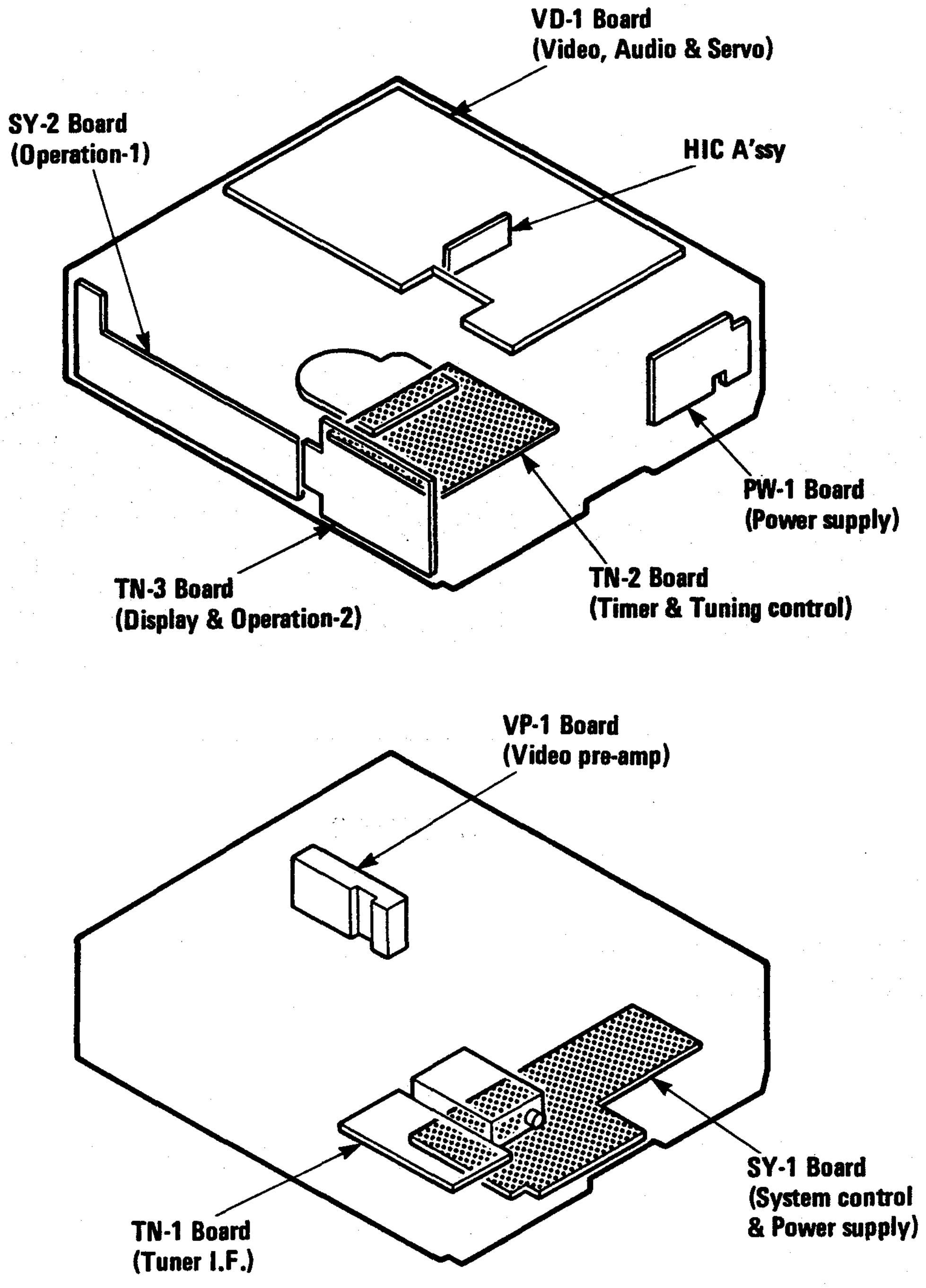

VD-1 Board
(Video, Audio & Servo)
SY-2 Board
(Operation-1)
HIC A'ssy
PW-1 Board
(Power supply)
TN-3 Board
(Display & Operation-2)
TN-2 Board
(Timer & Tuning control)
VP-1 Board
(Video pre-amp)
SY-1 Board
(System control
& Power supply)
TN-1 Board
(Tuner I.F.)

Fig. 1-1-1

## 2. ELECTRICAL ADJUSTMENTS

### PREPARATIONS

### 2-1. EQUIPMENTS

- Colour TV monitor
- Colour-bar generator (with RF and LINE OUTPUT)
- Audio frequency oscillator
- Attenuator
- Oscilloscope (dual trace; frequency response: 10MHz or more; probe: 10:1)
- Frequency counter (countable to 10MHz or higher)
- Digital voltmeter
- Alignment cassette (VHJ-0008) Colour bar 1KHz
- Alignment cassette (VHJ-0009) Monoscope 6KHz
- Alignment cassette (VHJ-0010) RF Sweep
- Alignment cassette (VHJ-0023) PAL Monoscope 6KHz, PAL Colour-bar 1KHz, SECAM Colour-bar 1KHz, PAL RF Sweep MESECAM Colour-bar 1KHz, NTSC Colour-bar 1KHz.
- AC voltmeter
- In/output probes

### 2-2. SET-UP

Because the RF input signal is used for adjustment of circuits, connect the colour-bar generator to the ANT IN terminal of the VCR. The RF input signal is processed by the tuner and IF circuit. It is important that the video output signal of the IF circuit satisfy the items shown in figure. Connect the oscilloscope to the VIDEO OUTPUT terminal of the video circuit, and then check the video output signal.

- The amplitude of the sync signal should be approximately 0.3Vp-p.
- The amplitude of the video signal should be approximately 0.7Vp-p.
- While observing the oscilloscope or TV screen, make fine-tuning adjustments so that the colour burst amplitude is approximately 0.3Vp-p.
- Check to be sure that there is no spike noise in the sync part of the horizontal sync signal.

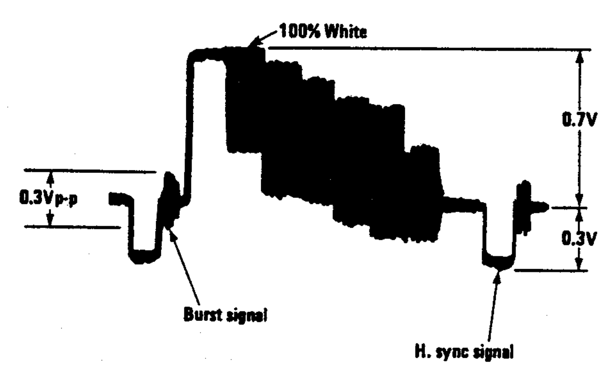
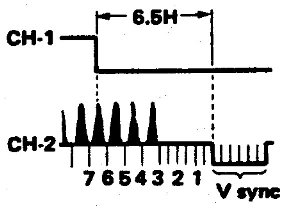
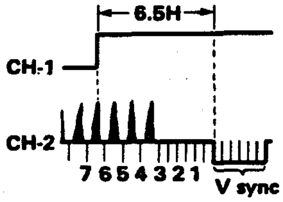
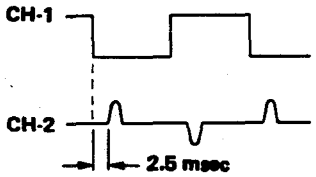


Fig. 2-2-1

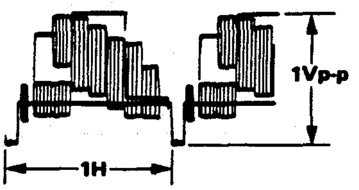
### 2-3. SERVO CIRCUIT ADJUSTMENT ... VD-1 Board

| No. | Item | Input | Mode | Point | Location | Remark |
|---|---|---|---|---|---|---|
| 1 | CH-1 SWITCHING POSITION | Alignment cassette (VHJ-0009 or VHJ-0023) | PLAY | TP1001 (VIDEO OUT terminal)<br>CN4008 (1) (trigger) | SVR4001 |  <br>Adjust SVR4001 so that the phase of the leading edge of the vertical sync signal is delayed 6.5 ±0.5H from the fall of the CH-1 waveform. |

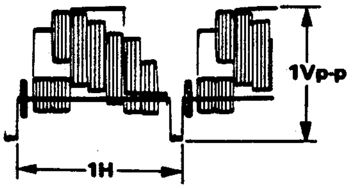
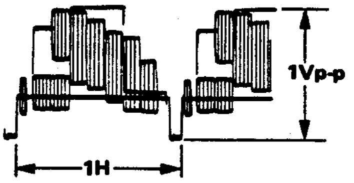
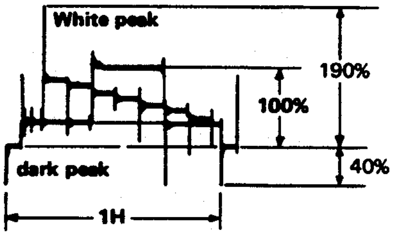
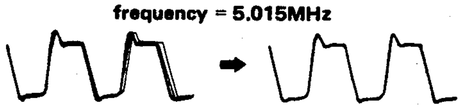
| No. | Item | Input | Mode | Point | Location | Remark |
|---|---|---|---|---|---|---|
| 2 | CH-2 SWITCHING POSITION | Alignment cassette (VHJ-0009 or VHJ-0023) | PLAY | TP1001 (VIDEO OUT terminal)<br>CN4008 (1) (trigger) | SVR4002 |  <br>Adjust SVR4002 so that the phase of the leading edge of the vertical sync signal is delayed 6.5 ±0.5H from the rise of the CH-1 waveform. |
| 3 | TRACKING | Colour bar from Colour bar generator | REC<br>↓<br>PLAY | CN4008 (4)<br>CN4008 (1) (trigger) | SVR4003 |  <br>1. Playback the recorded portion, and set the tracking control to the center click position.<br>2. Adjust SVR4003 so that the phase of the CH-2 waveform is 2.5 ±0.5msec after the fall of the CH-1 waveform. In this instance, delay the CH-2 waveform. |
| 4 | STILL V-LOCK | Colour bar from Colour bar generator | REC<br>↓<br>PLAY<br>↓<br>STILL | TV screen | SVR4004 | 1. Playback the recorded part, and put the VCR in the STILL mode.<br>2. Adjust SVR4004 so that the V jitter (very fine movement of the vertical sync) is minimized. |

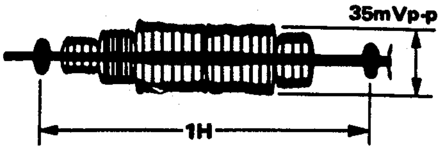
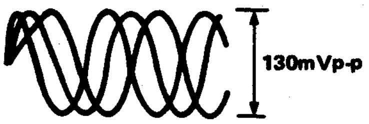
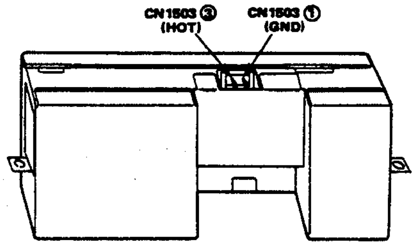
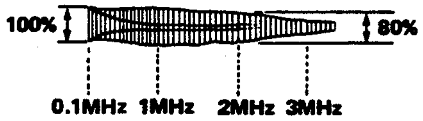
## 2-4. VIDEO CIRCUIT ADJUSTMENT ... VD-1 Board

NOTE (1): When adjusting No. 1, No. 2 and No. 4 terminate VIDEO OUTPUT terminal (CN1010 pin 19) at 75 ohms.
(2): To make this adjustment, alternately make the adjustments described in No. 3 and No. 4 below.
Repeat this procedure until both adjustment values are satisfied.

| No. | Item | Input | Mode | Point | Location | Remark |
|---|---|---|---|---|---|---|
| 1 | E-E LEVEL | Colour bar from Colour bar generator | E-E | TP1001 | SVR1008 |  <br>Adjust SVR1008 so that the level is 1.00 ±0.05 Vp-p. |

NOTE (3): No-signal E-E mode is do not supply any signal to VIDEO INPUT terminal (CN1010 pin 20)

| No. | Item | Input | Mode | Point | Location | Remark |
|---|---|---|---|---|---|---|
| 2 | PLAYBACK LEVEL | Alignment cassette (VHJ-0008 or VHJ-0023) | PLAY (Colour bar) | TP1001 | SVR1002 |  <br>Adjust SVR1002 so that the level is 1.00 ±0.05 Vp-p. |
| 3 | CARRIER SET | None NOTE (3) | E-E | TP1003 | SVR1005 | 1. Set the TUNER/EXT IN selector to the EXT IN position and put the VCR in the no-signal stop mode.<br>2. Adjust SVR1005 so that the frequency is 3.80 ±0.05 MHz. |
| 4 | DEVIATION | Colour bar from Colour bar generator | REC (Adjustment)<br>↓<br>PLAY (Check) | TP1001 | SVR1004 |  <br>1. Playback the recorded part, and check that the level is 1.00 ±0.05Vp-p.<br>2. If the level is not 1.00 ±0.05Vp-p, adjust SVR1004, record and playback it until the value is satisfied. |
| 5 | DARK CLIP AND WHITE CLIP | Colour bar from Colour bar generator | E-E | TP1004 | SVR1006 (DARK CLIP)<br>SVR1007 (WHITE CLIP) |  <br>1. Adjust SVR1006 so that the dark peak is $40^{+5}_{-0}$ %.<br>2. Adjust SVR1007 so that the white peak is $190^{+0}_{-5}$ %. |
| 6 | VCO FREE OSCILLATION FREQUENCY | None | E-E | TP1006 | SVR1009 |  <br>Adjust SVR1009 so that the double waveform is merged together to becomes as one. |

| No. | Item | Input | Mode | Point | Location | Remark |
|---|---|---|---|---|---|---|
| 7 | CHRO-MINANCE SIGNAL RECORDING CURRENT | Colour bar from Colour bar generator | REC | CN1503 (3)<br>(HOT)<br>CN1503 (1)<br>(GND) | SVR1010 |  <br>1. Turn SVR1001 all the way to the left, looking from the parts side.<br>2. Adjust SVR1010 so that the level is 35.0 ±2 mVp-p. |
| 8 | LUMINANCE SIGNAL RECORDING CURRENT | B/W signal from Colour bar generator | REC | CN1503 (3)<br>(HOT)<br>CN1503 (1)<br>(GND) | SVR1001 |  <br>Adjust SVR1001 so that the level is 130 ±5 mVp-p.<br> |
| 9 | PLAYBACK FREQUENCY CHARAC-TERISTIC | Alignment cassette (VHJ-0010 or VHJ-0023) | PLAY<br>(RF sweep) | TP1001<br>CN4008 (1)<br>(trigger) | SVR1011 |  <br>1. Set the tracking control to the best point.<br>2. Adjust the 2 MHz amplitude to 80 % of the 0.1 MHz amplitude with SVR1011. |

## 2-5. AUDIO CIRCUIT ADJUSTMENT ... VD-1 Board

NOTE (1): No-signal record mode is do not supply any signal to AUDIO INPUT terminal (CN1010 pin 2, pin 6)
*NOTE (2): Adjustment No. 2 is unnecessary for VHR-2300E and VHR-2300SP.

| No. | Item | Input | Mode | Point | Location | Remark |
|---|---|---|---|---|---|---|
| 1 | BIAS | None | REC | CN2002 (3)<br>CN2002 (1)<br>(GND) | SVR2001 | 1. Set the input TUNER/EXT IN selector to the EXT IN position and put the VCR in the no-signal record mode.<br>2. Adjust SVR2001 so that the level is 30mVrms. |
| 2 | PLAYBACK OUTPUT LEVEL (1) NOTE (2) | Audio signal (1 KHz, –4 dBs) from Audio signal generator | REC<br>↓<br>PLAY | CN1010 (1) | SVR2002 | Adjust SVR2002 so that the recorded 1 KHz output level becomes –4 dBs in the PLAY mode. |

*NOTE (3): Adjustment No. 3 is unnecessary for VHR-2300G and VHR-2300EX.

| No. | Item | Input | Mode | Point | Location | Remark |
|---|---|---|---|---|---|---|
| 3 | PLAYBACK OUTPUT LEVEL (2) NOTE (3) | Audio signal (1 KHz, −20 dBs) from Audio signal generator | REC<br>↓<br>PLAY | AUDIO OUT terminal | SVR2002 | Adjust SVR2002 so that the recorded 1 KHz output level becomes −8 dBs in the PLAY mode. |

## 2-6. TUNER IF CIRCUIT ADJUSTMENT

| No. | Item | Input | Mode | Point | Location | Remark |
|---|---|---|---|---|---|---|
| 1 | RF AGC | TV broadcast | E-E | TV screen | SVR6001 | 1. Set the AFT switch to ON position.<br>2. Turn SVR6001 all the way to the right, looking from the parts side.<br>3. While watching the TV screen, turn SVR6001 slowly to the left and adjust it to the point where S/N is best point. |

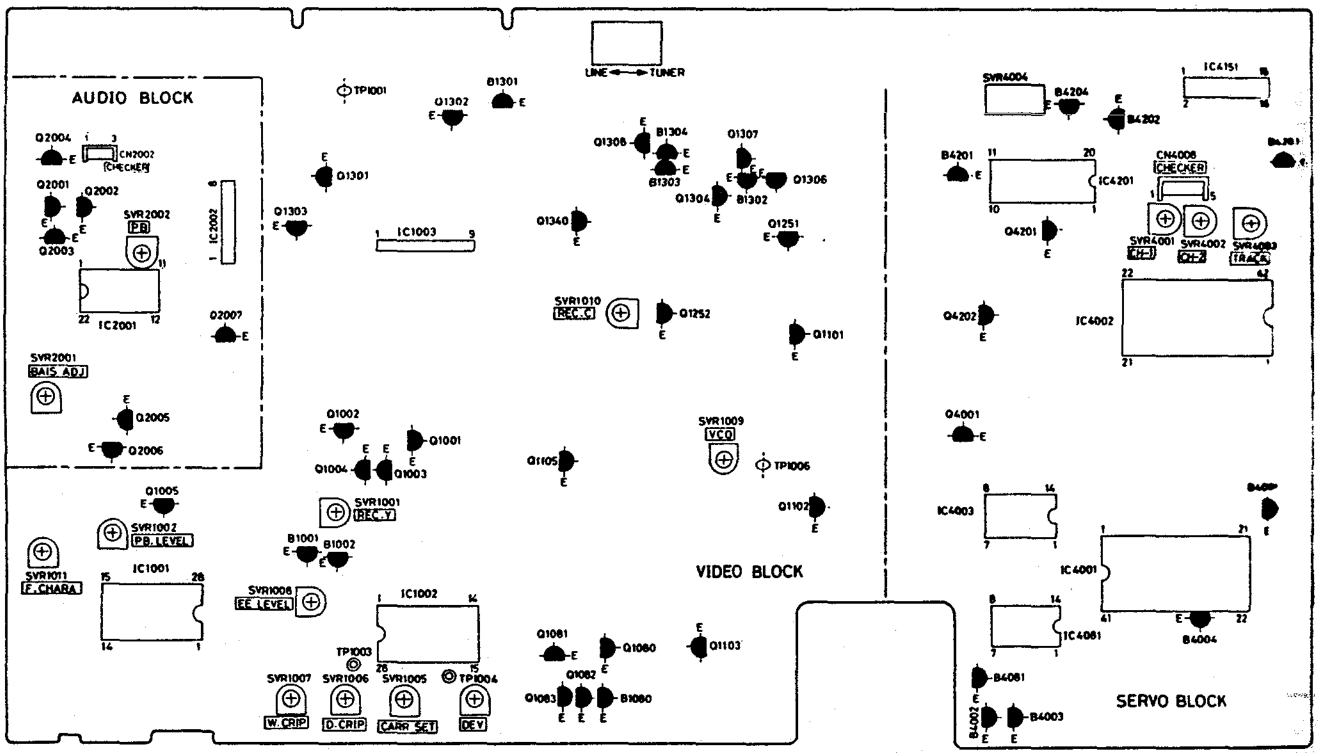
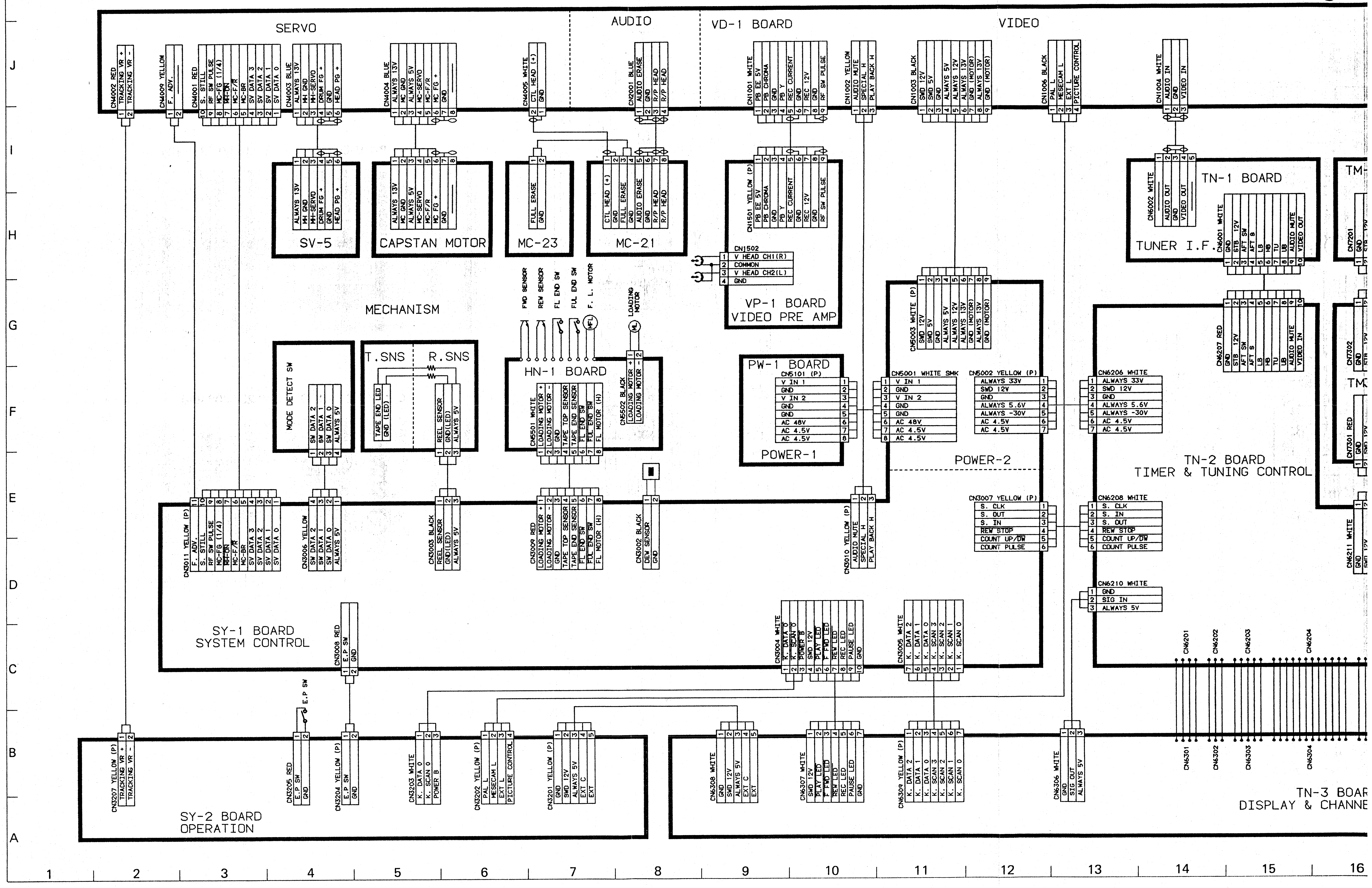

AUDIO BLOCK
Q2004
CN2002
CHECKER
Q2001
Q2002
SVR2002
PB
Q2003
IC2002
IC2001
Q2007
SVR2001
BAIS ADJ
Q2005
Q2006
Q1005
SVR1002
PB. LEVEL
SVR1011
F. CHARA
IC1001
TP1001
Q1302
B1301
Q1301
Q1303
IC1003
LINE ◄—► TUNER
Q1308
B1304
B1303
Q1307
Q1306
Q1304
B1302
Q1340
Q1251
SVR1010
REC. C
Q1252
Q1101
Q1002
Q1001
Q1004
Q1003
SVR1001
REC. Y
B1001
B1002
Q1105
SVR1009
VCO
TP1006
Q1102
VIDEO BLOCK
SVR1008
EE LEVEL
IC1002
TP1003
TP1004
SVR1007
W. CRIP
SVR1006
D. CRIP
SVR1005
CARR SET
DEV
Q1081
Q1080
Q1103
Q1082
Q1083
B1080
SVR4004
B4204
B4202
IC4151
B4201
IC4201
CN4008
CHECKER
Q4201
SVR4001
CH-1
SVR4002
CH-2
TRACK
Q4202
IC4002
Q4001
IC4003
IC4001
IC4081
B4004
B4081
B4002
B4003
SERVO BLOCK

Fig. 2-3-1 VD-1 Board (Foil side view)

2300 G
Ⓐ

## OVERALL WIRING DIAGRAM


SERVO
AUDIO
VD-1 BOARD
VIDEO
CN4002 RED
TRACKING VR +
TRACKING VR -
CN4009 YELLOW
F. ADV.
CN4001 RED
S. STILL
RF SW PULSE
MC-FG (1/4)
MH-ON
MC-F/R
MC-BR
SV DATA 3
SV DATA 2
SV DATA 1
SV DATA 0
CN4003 BLUE
ALWAYS 13V
MH GND
MH-SERVO
DRUM FG +
GND
HEAD PG +
CN4004 BLUE
ALWAYS 13V
MC GND
ALWAYS 5V
MC-SERVO
MC-F/R
MC-FG +
GND
CN4005 WHITE
CTL HEAD (+)
GND
CN2001 BLUE
AUDIO ERASE
GND
R/P HEAD
R/P HEAD
CN1001 WHITE
PB EE 5V
PB CHROMA
GND
PB Y
REC CURRENT
GND
REC 12V
GND
RF SW PULSE
CN1002 YELLOW
AUDIO MUTE
SPECIAL H
PLAY BACK H
CN1003 BLACK
SWD 12V
SWD 5V
GND
ALWAYS 5V
ALWAYS 12V
ALWAYS 13V
GND (MOTOR)
ALWAYS 13V
GND (MOTOR)
CN1006 BLACK
PAL L
MESECAM L
EXT L
PICTURE CONTROL
CN1004 WHITE
AUDIO IN
GND
VIDEO IN
SV-5
CAPSTAN MOTOR
MC-23
FULL ERASE
GND
MC-21
CTL HEAD (+)
GND
FULL ERASE
GND
AUDIO ERASE
GND
R/P HEAD
R/P HEAD
CN1501 YELLOW (P)
VP-1 BOARD
VIDEO PRE AMP
CN1502
V HEAD CH1(R)
COMMON
V HEAD CH2(L)
GND
TN-1 BOARD
TUNER I.F.
CN6002 WHITE
AUDIO OUT
GND
VIDEO OUT
CN6001 WHITE
GND
STB 12V
AFT SW
AFT B
LB
HB
TU
UB
AUDIO MUTE
VIDEO OUT
TM
CN7201
MECHANISM
FWD SENSOR
REW SENSOR
FL END SW
FUL END SW
F. L. MOTOR
LOADING MOTOR
MFL
ML
MODE DETECT SW
SW DATA 2
SW DATA 1
SW DATA 0
ALWAYS 5V
T.SNS
R.SNS
TAPE END LED
GND (LED)
REEL SENSOR
GND(LED)
ALWAYS 5V
HN-1 BOARD
CN5501 WHITE
LOADING MOTOR +
LOADING MOTOR -
GND
TAPE TOP SENSOR
TAPE END SENSOR
FL END SW
FUL END SW
FL MOTOR (H)
CN5502 BLACK
LOADING MOTOR +
LOADING MOTOR -
PW-1 BOARD
CN5101 (P)
V IN 1
GND
V IN 2
GND
GND
AC 48V
AC 4.5V
AC 4.5V
POWER-1
CN5003 WHITE (P)
CN5001 WHITE SMK
V IN 1
GND
V IN 2
GND
GND
AC 48V
AC 4.5V
AC 4.5V
CN5002 YELLOW (P)
ALWAYS 33V
SWD 12V
GND
ALWAYS 5.6V
ALWAYS -30V
AC 4.5V
AC 4.5V
POWER-2
CN6206 WHITE
CN6207 RED
TN-2 BOARD
TIMER & TUNING CONTROL
CN7302
CN7301 RED
CN3011 YELLOW (P)
CN3006 YELLOW
CN3003 BLACK
CN3009 RED
CN3002 BLACK
DEW SENSOR
GND
CN3010 YELLOW (P)
CN3007 YELLOW (P)
S. CLK
S. OUT
S. IN
REW STOP
COUNT UP/DW
COUNT PULSE
CN6208 WHITE
CN6210 WHITE
GND
SIG IN
ALWAYS 5V
CN6211 WHITE
SY-1 BOARD
SYSTEM CONTROL
CN3008 RED
E.P SW
GND
CN3004 WHITE
K. DATA 0
K. SCAN 0
POWER B
SWD 12V
PLAY LED
F FWD LED
REW LED
REC LED
PAUSE LED
GND
CN3005 WHITE
K. DATA 2
K. DATA 1
K. DATA 0
K. SCAN 3
K. SCAN 2
K. SCAN 1
K. SCAN 0
CN6201
CN6202
CN6203
CN6204
E.P SW
CN3207 YELLOW (P)
CN3205 RED
CN3204 YELLOW (P)
CN3203 WHITE
CN3202 YELLOW (P)
CN3201 YELLOW (P)
SWD 12V
ALWAYS 5V
EXT C
EXT
SY-2 BOARD
OPERATION
CN6308 WHITE
CN6307 WHITE
CN6309 YELLOW (P)
CN6306 WHITE
SIG OUT
CN6301
CN6302
CN6303
CN6304
TN-3 BOAR
DISPLAY & CHANNE
K
J
I
H
G
F
E
D
C
B
A
1
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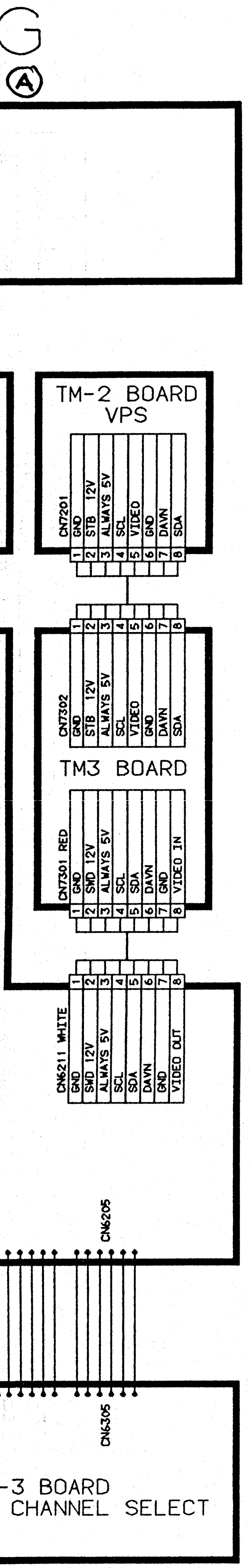
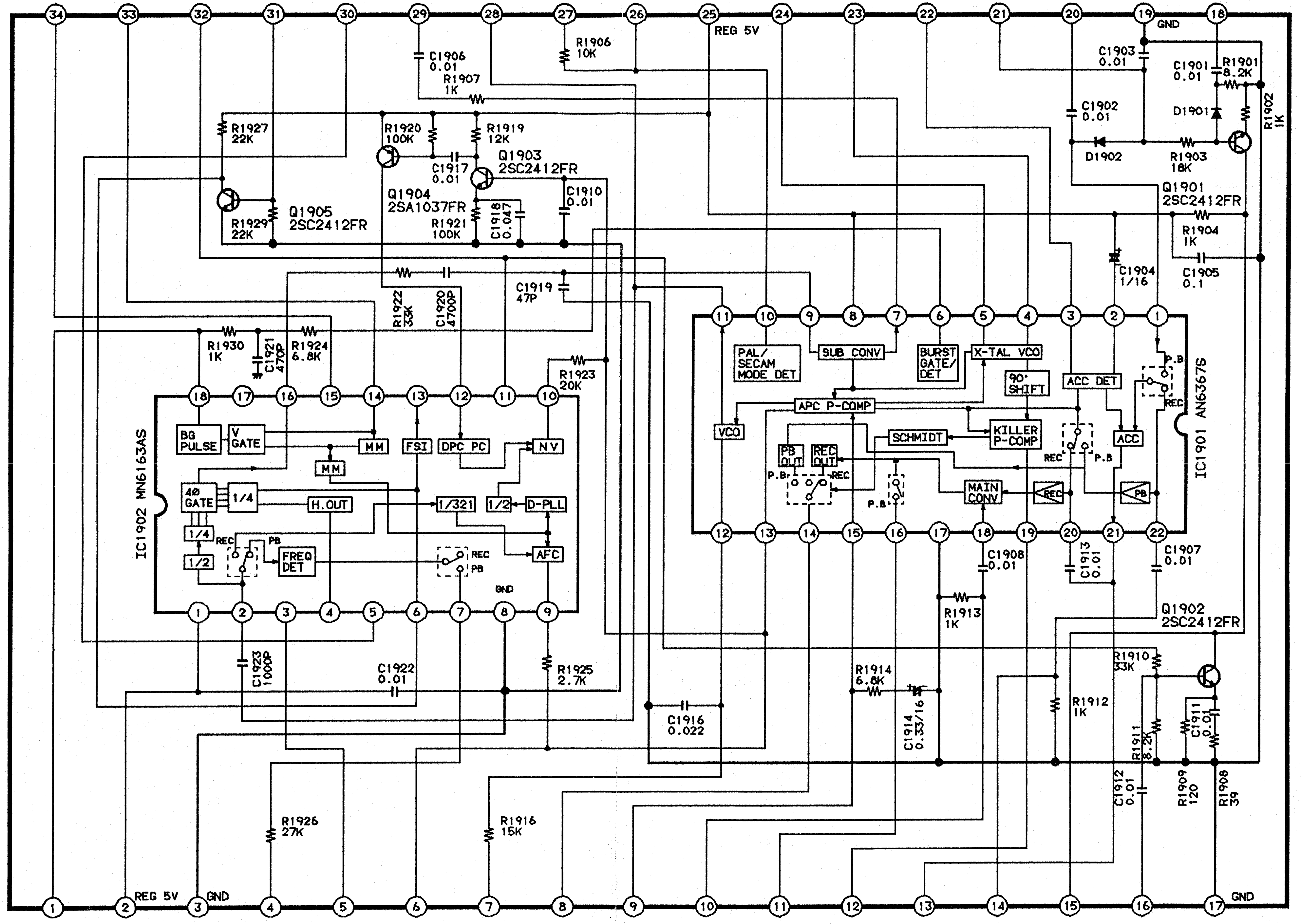
2-1


G
Ⓐ
TM-2 BOARD
VPS
CN7201
GND
STB 12V
ALWAYS 5V
SCL
VIDEO
GND
DAVN
SDA
CN7302
GND
STB 12V
ALWAYS 5V
SCL
VIDEO
GND
DAVN
SDA
TM3 BOARD
CN7301 RED
GND
SWD 12V
ALWAYS 5V
SCL
SDA
DAVN
GND
VIDEO IN
CN6211 WHITE
GND
SWD 12V
ALWAYS 5V
SCL
SDA
DAVN
GND
VIDEO OUT
CN6205
CN6305
-3 BOARD
CHANNEL SELECT

## HIC OF VIDEO CIRCUIT DIAGRAM

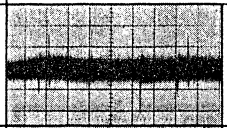
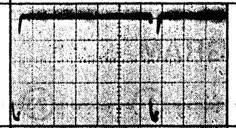
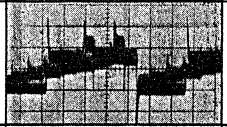
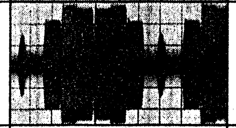
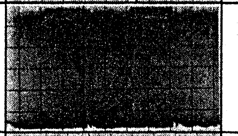
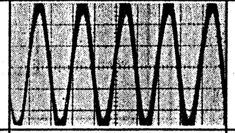
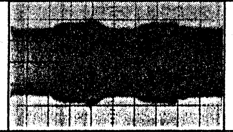
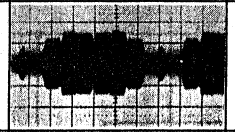
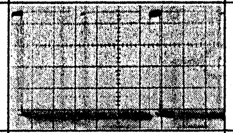
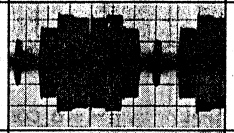
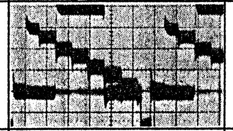
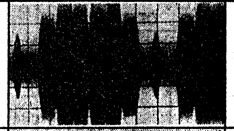
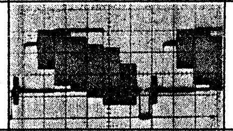
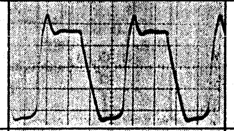
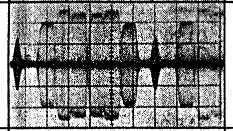
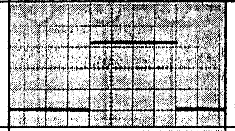
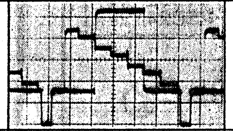
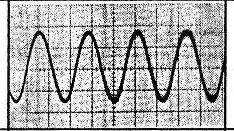
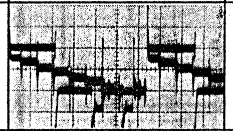
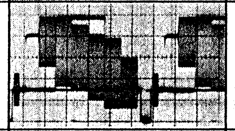
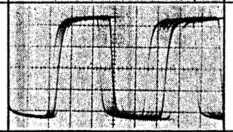
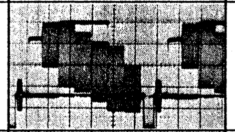
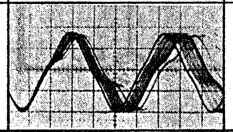
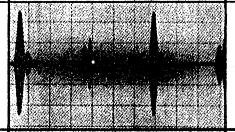
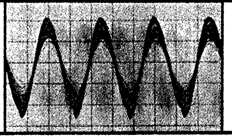

REG 5V
GND
C1906 0.01
R1907 1K
R1906 10K
R1927 22K
R1929 22K
Q1905 2SC2412FR
R1920 100K
R1919 12K
C1917 0.01
Q1903 2SC2412FR
Q1904 2SA1037FR
R1921 100K
C1918 0.047
C1910 0.01
C1919 47P
R1922 33K
C1920 4700P
R1930 1K
C1921 470P
R1924 6.8K
R1923 20K
IC1902 MN6163AS
BG PULSE
V GATE
MM
FSI
DPC PC
NV
40 GATE
1/4
H.OUT
1/321
1/2
D-PLL
REC
PB
FREQ DET
AFC
C1923 1000P
C1922 0.01
R1925 2.7K
R1926 27K
R1916 15K
C1916 0.022
C1903 0.01
C1901 0.01
R1901 8.2K
C1902 0.01
D1901
D1902
R1903 18K
R1902 1K
Q1901 2SC2412FR
R1904 1K
C1904 1/16
C1905 0.1
IC1901 AN6367S
PAL/ SECAM MODE DET
SUB CONV
BURST GATE/ DET
X-TAL VCO
90° SHIFT
ACC DET
APC P-COMP
VCO
SCHMIDT
KILLER P-COMP
ACC
PB OUT
REC OUT
P.B
MAIN CONV
C1908 0.01
C1913 0.01
C1907 0.01
R1913 1K
R1914 6.8K
C1914 0.33/16
Q1902 2SC2412FR
R1910 33K
R1912 1K
R1911 8.2K
C1911 0.01
C1912 0.01
R1909 120
R1908 39

Ⓐ
VHR-2300G

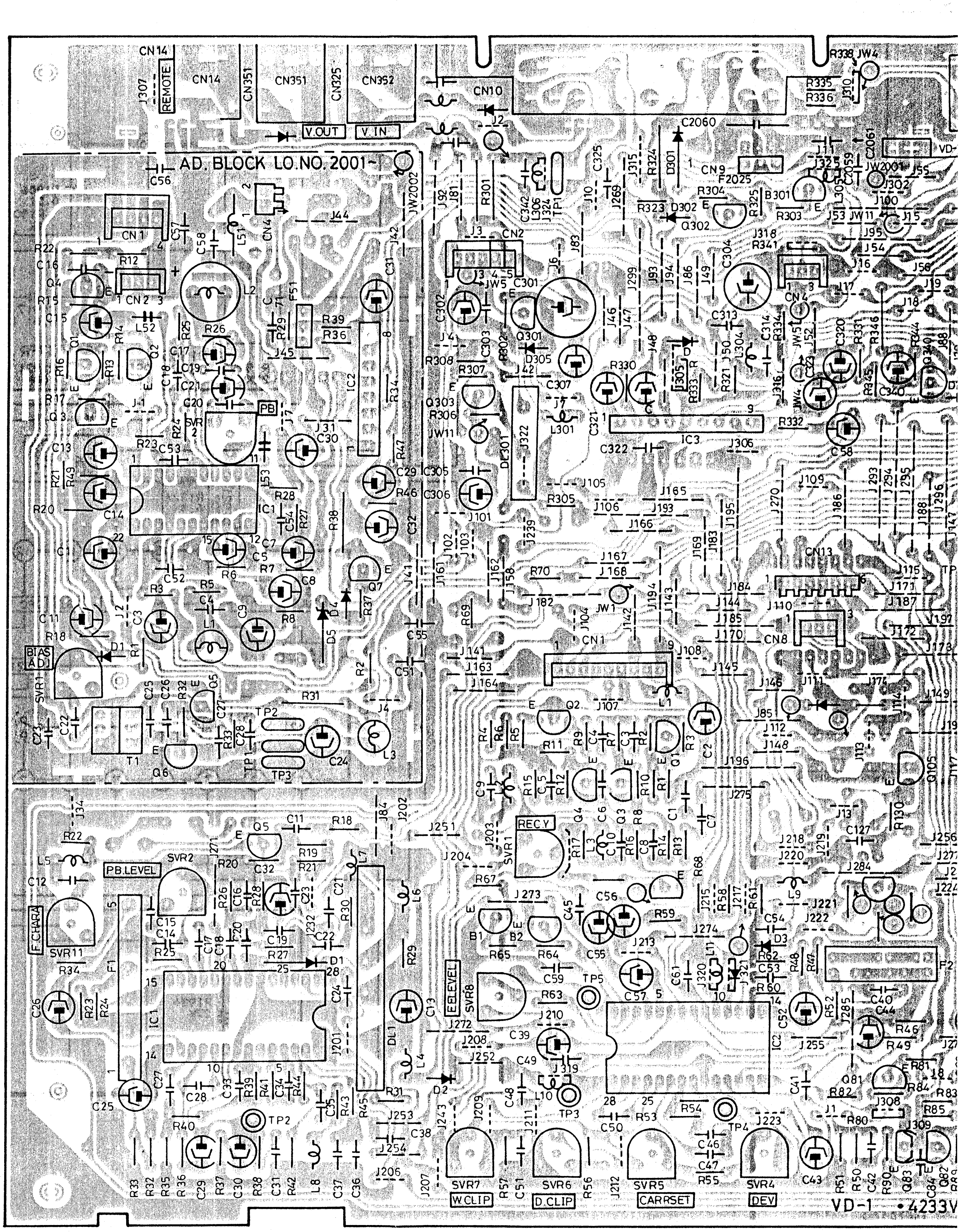
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

**Ⓑ VHR-2300G**

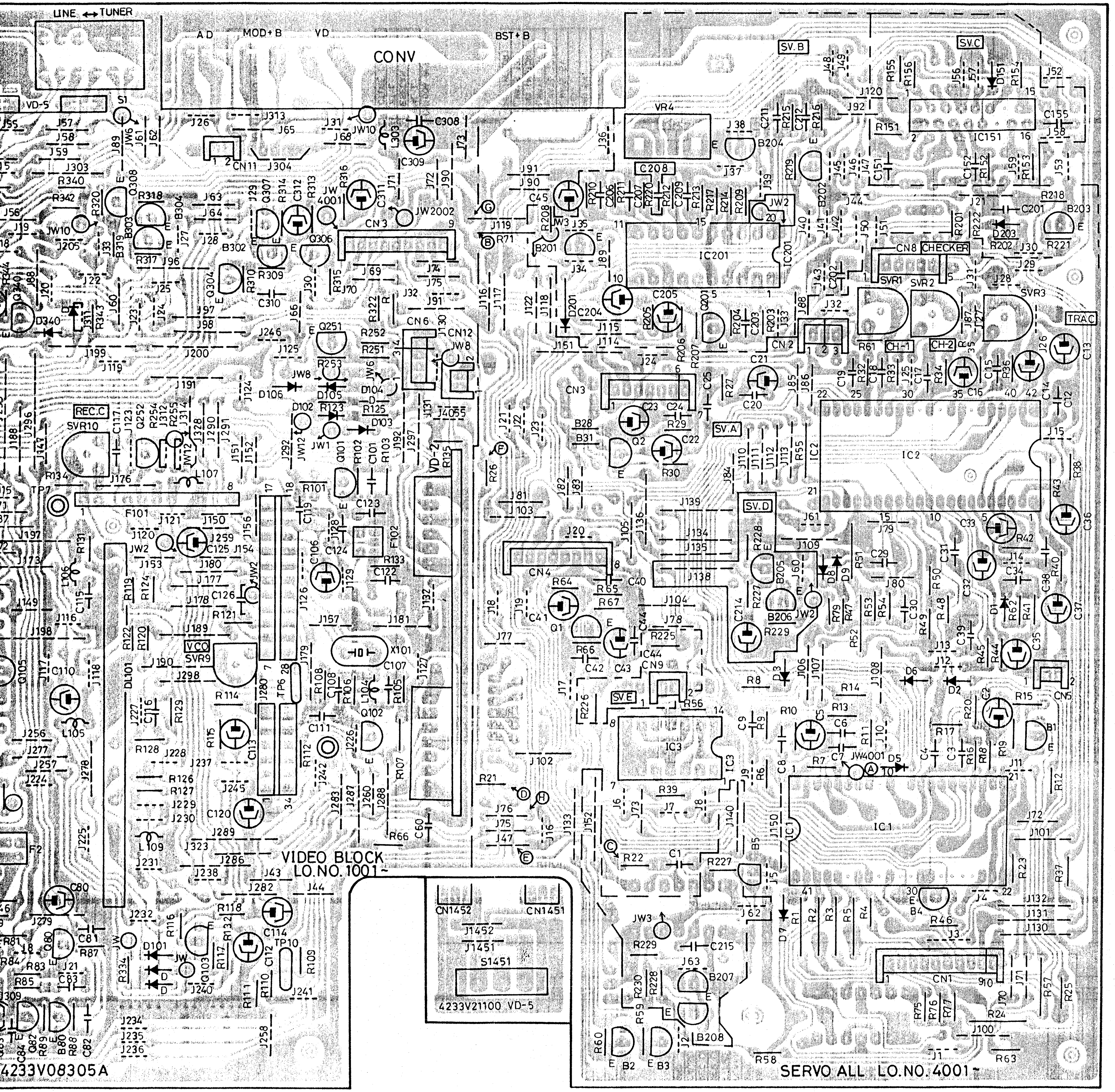
## WAVEFORM OF VD-1, 2

| Pin No. | | | Pin No. | | |
|---|---|---|---|---|---|
| IC1001<br>⑨ |  | PLAY 12 mVp-p | HIC1001<br>① |  | PLAY/REC 5 Vp-p |
| ⑬ |  | PLAY 120 mVp-p | ⑧ |  | REC 1.05 Vp-p |
| ⑯ |  | PLAY 1.1 Vp-p | ⑩ |  | PLAY/REC<br>120 mVp-p |
| ㉖ |  | PLAY 750 mVp-p | ⑪ |  | PLAY 1.4Vp-p |
| IC1002<br>② |  | PLAY/REC 4.8 Vp-p | ⑭ |  | REC 220 mVp-p<br>PLAY 560 mVp-p |
| ⑥⑧ |  | PLAY ⑥ 220 mVp-p<br>⑧ 750 mVp-p | ⑳ |  | PLAY 120 mVp-p |
| ⑩ |  | REC/EE 2 Vp-p | ㉘ |  | PLAY/REC 950 mVp-p<br>5.015 MHz |
| ⑫ |  | PLAY 500 mVp-p | ㉛ |  | PLAY/REC 630 mVp-p |
| ⑲ |  | REC 1.05 Vp-p | Q1102<br>Ⓔ |  | PLAY/REC 600 mVp-p<br>4.43 MHz |
| ㉑ |  | REC 280 mVp-p | Q1340<br>Ⓔ |  | REC/EE 990 mVp-p |
| ㉘ |  | REC 920 mVp-p | TP1001 |  | PLAY/REC 1 Vp-p |
| CN1001<br>⑤ |  | REC 3.7 Vp-p | IC1201<br>⑨ |  | REC/PLAY [SECAM]<br>0.5Vp-p |
| | | | TP1201 |  | REC/PLAY [SECAM]<br>4.6Vp-p (7.813 kHz) |

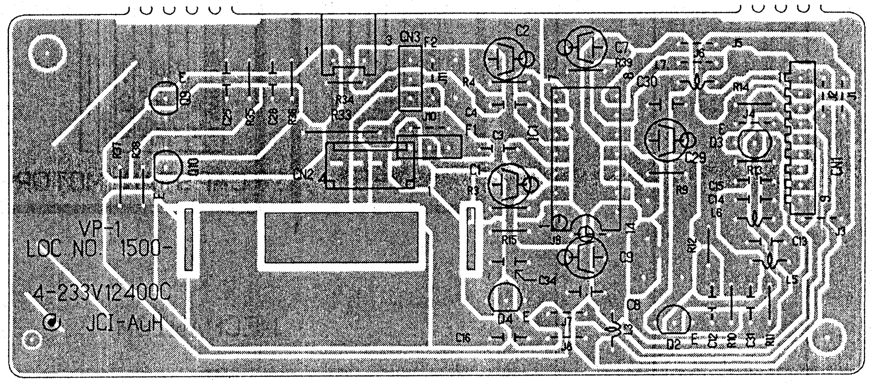
## P.C.B. VD-1, 5 VIDEO, AUDI


AD. BLOCK LO.NO. 2001-
REMOTE
CN14
CN351
CN325
CN352
V.OUT
V.IN
CN10
BIAS ADJ
SVR1
PB LEVEL
SVR2
F.CHAR
SVR11
E.E LEVEL
SVR8
RECY
SVR7
W.CLIP
SVR6
D.CLIP
SVR5
CARRSET
SVR4
DEV
IC1
IC2
IC3
TP1
TP2
TP3
TP4
TP5
VD-1 4233V

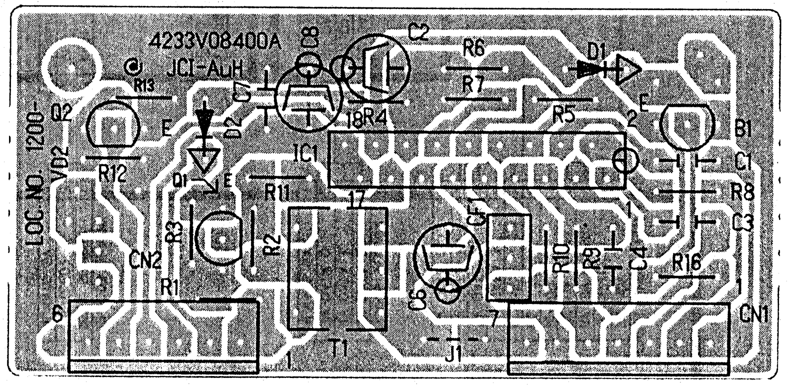
## AUDIO, SERVO (VD-1 143-0-233V08349)
## (VD-5 143-0-233V21100)


LINE ↔ TUNER
VD-5
A D
MOD+B
VD
CONV
BST+B
SV.B
SV.C
IC151
VR4
C208
IC201
CN3
CN8 CHECKER
SVR1
SVR2
SVR3
TRAC
CN2
CH-1
CH-2
CN6
CN12
REC.C
SVR10
SV.A
IC2
SV.D
CN4
VD-2
VCO
SVR9
X101
SV.E
CN9
IC3
IC1
CN1
CN5
VIDEO BLOCK
LO.NO.1001
CN1452
CN1451
J1452
J1451
S1451
4233V21100 VD-5
SERVO ALL LO.NO.4001
4233V08305A

### P.C.B. VP-1 VIDEO PRE-AMP (143-0-233V12425)

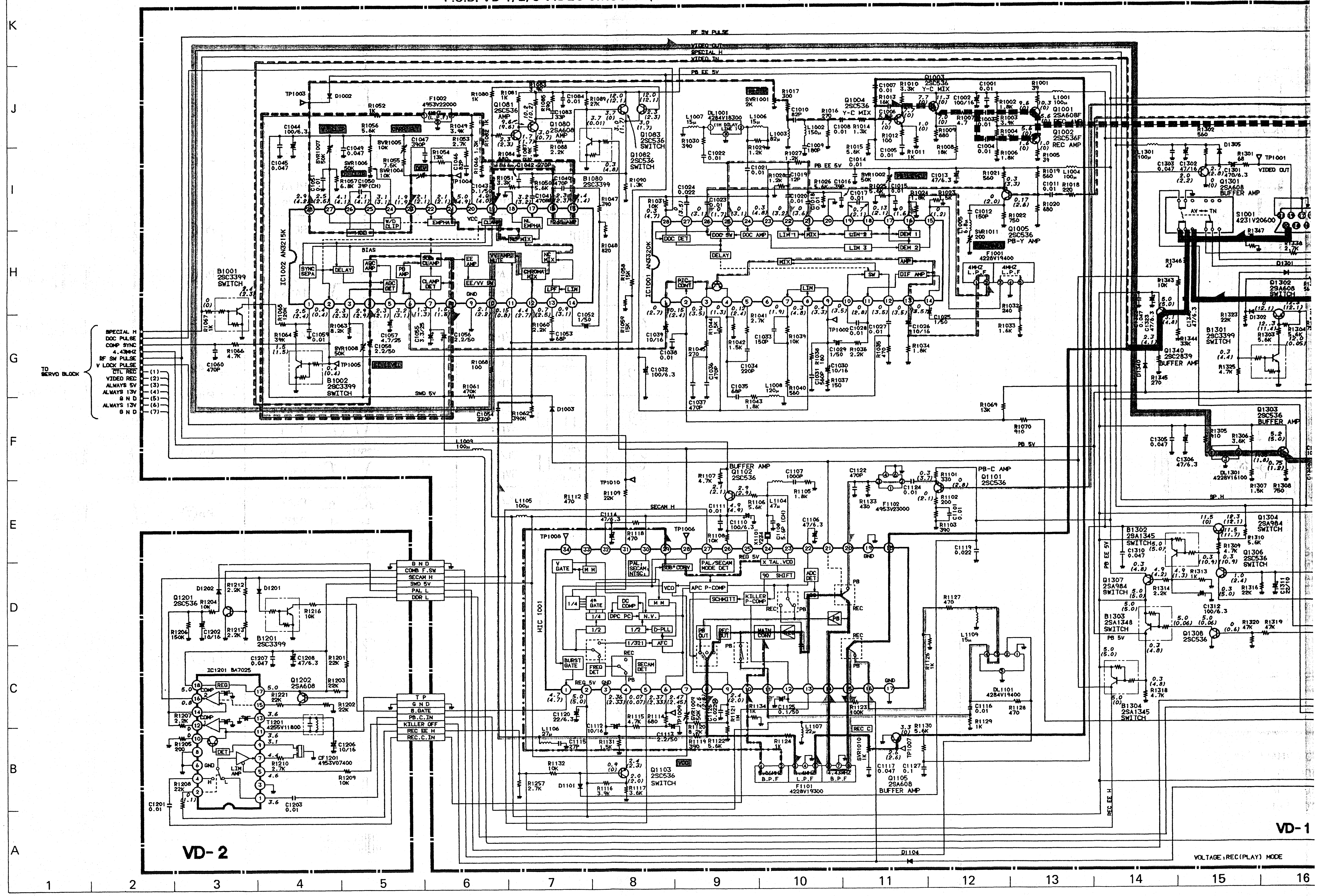

VP-1
LOC NO 1500-
4-233V12400C
JCI-AuH

### P.C.B. VD-2 VIDEO (143-0-233V08400)


4233V08400A
JCI-AuH
LOC.NO. 1200-
VD2
IC1
CN2
CN1
T1
J1

6 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31

## P.C.B. VD-1, 2, 5 VIDEO CIRCUIT (VD-1 143-0-233V08349) (VD-2 143-0-233V08400) (VD-5 143-0-233V21100)



RF SW PULSE
VIDEO OUT
SPECIAL H
VIDEO IN
PB EE 5V
IC1002 AN3215K
IC1001 AN3320K
HIC 1001
IC1201 BA7025
Q1081 2SC536 AMP
Q1080 2SA608 AMP
Q1083 2SC536 SWITCH
Q1082 2SC536 SWITCH
B1080 2SC3399
B1001 2SC3399 SWITCH
B1002 2SC3399 SWITCH
Q1003 2SC536 Y-C MIX
Q1004 2SC536 Y-C MIX
Q1001 2SA608F REC AMP
Q1002 2SC536F REC AMP
Q1005 2SC536 PB-Y AMP
F1001 4228V19400
F1002 4953V22000
DL1001 4284V18300 1H DELAY LINE
Q1301 2SA608 BUFFER AMP
S1001 4231V20600
Q1302 2SA608 SWITCH
B1301 2SC3399 SWITCH
Q1340 2SC2839 BUFFER AMP
Q1303 2SC536 BUFFER AMP
DL1301 4228V16100
Q1304 2SA984 SWITCH
B1302 2SA1345 SWITCH
Q1306 2SC536 SWITCH
Q1307 2SA984 SWITCH
B1303 2SA1348 SWITCH
Q1308 2SC536
B1304 2SA1345 SWITCH
Q1102 2SC536 BUFFER AMP
Q1101 2SC536 PB-C AMP
F1102 4953V23000
Q1103 2SC536 SWITCH
Q1105 2SA608 BUFFER AMP
F1101 4228V19300
DL1101 4284V19400
Q1201 2SC536
B1201 2SC3399
Q1202 2SA608
T1201 4255V11800
CF1201 4953V07400
SYNC SEPA
DELAY
AGC AMP
AGC DET
PB AMP
SUB CLAMP
CLAMP DET
EE AMP
EE/VV SW
W/D CLIP
EMPHA
CLAMP
NL EMPHA
REC AMP
Y/C MIX
NC MIX
CHROMA MIX
LPF
LIM
BIAS
VCC
DOC DET
DOC SW
DOC AMP
LIM 1
MIX
LIM 2
LIM 3
DEM 1
DEM 2
P/C CONT
SW
DIF AMP
AMP
4MHZ L.P.F
V GATE
M M
PAL SECAM NTSC
SUB CONV
PAL/SECAM MODE DET
X TAL VCO
90 SHIFT
ADC DET
VCO
APC P-COMP
1/4
4H GATE
DC COMP
DPC PC
N.V.
D-PLL
1/2
1/321
AFC
SCHMITT
KILLER P-COMP
BURST GATE
FREQ DET
SECAM DET
PB OUT
REC OUT
MAIN CONV
B.P.F
L.P.F
4.43MHZ B.P.F
REC C
TO SERVO BLOCK
SPECIAL H
DOC PULSE
COMP SYNC
4.43MHZ
RF SW PULSE
V LOCK PULSE
CTL REC (1)
VIDEO REC (2)
ALWAYS 5V (3)
ALWAYS 13V (4)
GND (5)
ALWAYS 13V (6)
GND (7)
GND
COMB F.SW
SECAM H
SWD 5V
PAL L
DDR L
TP
GND
B.GATE
PB.C.IN
KILLER OFF
REC EE H
REC.C.IN
BUFFER AMP
SECAM H
SWD 5V
PB 5V
REG 5V
REC EE H
SP.H
VIDEO OUT
TP1001
AV TN
VD-2
VD-1
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
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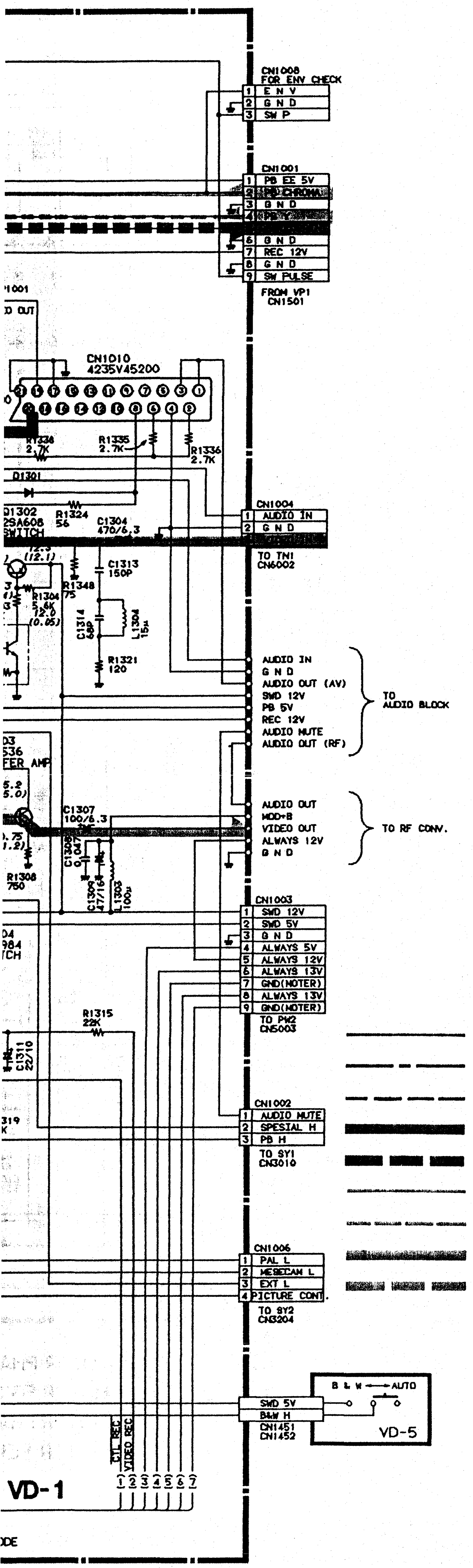
11
12
13
14
15
16

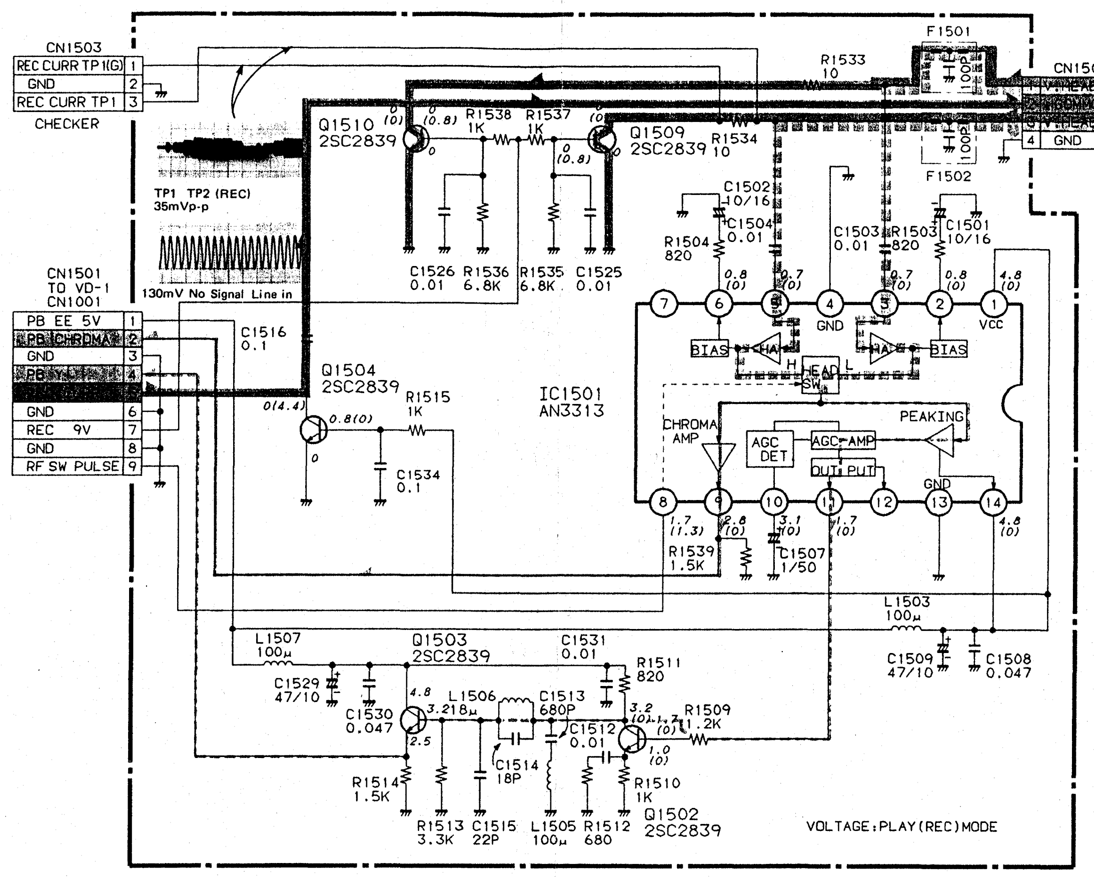
VOLTAGE: REC(PLAY) MODE

2-3


CN1008 FOR ENV CHECK
ENV
GND
SW P
CN1001
PB EE 5V
PB CHROMA
GND
PB Y
GND
REC 12V
GND
SW PULSE
FROM VP1 CN1501
CN1010 4235V45200
R1335 2.7K
R1336 2.7K
CN1004
AUDIO IN
GND
TO TN1 CN6002
C1304 470/6.3
C1313 150P
R1321 120
AUDIO IN
GND
AUDIO OUT (AV)
SWD 12V
PB 5V
REC 12V
AUDIO MUTE
AUDIO OUT (RF)
TO AUDIO BLOCK
AUDIO OUT
MOD+B
VIDEO OUT
ALWAYS 12V
GND
TO RF CONV.
C1307 100/6.3
R1308 750
CN1003
SWD 12V
SWD 5V
GND
ALWAYS 5V
ALWAYS 12V
ALWAYS 13V
GND(MOTER)
ALWAYS 13V
GND(MOTER)
TO PW2 CN5003
R1315 22K
CN1002
AUDIO MUTE
SPESIAL H
PB H
TO SY1 CN3010
CN1006
PAL L
MESECAM L
EXT L
PICTURE CONT.
TO SY2 CN3204
B&W AUTO
SWD 5V
B&W H
CN1451 CN1452
VD-5
CTL REC
VIDEO REC
VD-1

- ———— : REC mode C SIGNAL
- —— – —— : C SUB SIGNAL
- — — — — : REC mode Y SIGNAL
- ▬▬▬▬ : VIDEO INPUT SIGNAL
- ▬ ▬ ▬ : REC mode Y+C CURRENT
- ············ : PLAY mode C SIGNAL
- ············ : PLAY mode Y SIGNAL
- ▨▨▨▨ : PLAY mode VIDEO OUTPUT SIGNAL
- ▨ ▨ ▨ : PLAY mode Y+C SIGNAL

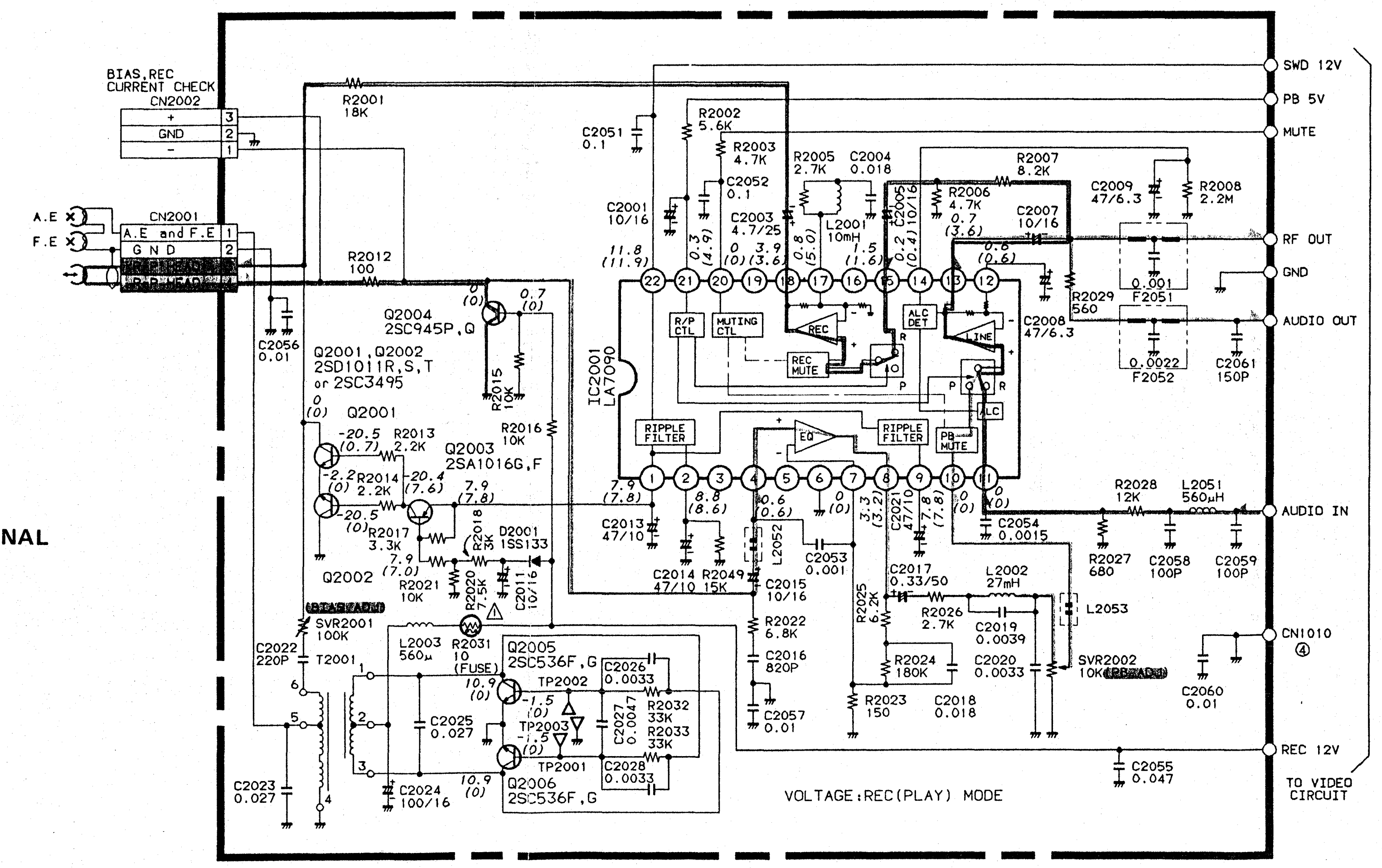
## P.C.B. VP-1 VIDEO PRE-AMP CIRCUIT (143-0-233V12425)


CN1503
REC CURR TP1(G)
GND
REC CURR TP1
CHECKER
TP1 TP2 (REC) 35mVp-p
130mV No Signal Line in
Q1510 2SC2839
R1538 1K
R1537 1K
Q1509 2SC2839
R1534 10
R1533 10
F1501
F1502
CN1502
GND
C1526 0.01
R1536 6.8K
R1535 6.8K
C1525 0.01
C1502 10/16
C1504 0.01
R1504 820
C1503 0.01
R1503 820
C1501 10/16
CN1501 TO VD-1 CN1001
PB EE 5V
PB CHROMA
GND
PB Y
GND
REC 9V
GND
RF SW PULSE
C1516 0.1
Q1504 2SC2839
R1515 1K
C1534 0.1
IC1501 AN3313
BIAS
HEAD SW
GND
VCC
CHROMA AMP
AGC DET
AGC AMP
OUT PUT
PEAKING
R1539 1.5K
C1507 1/50
L1503 100μ
L1507 100μ
Q1503 2SC2839
C1531 0.01
R1511 820
C1509 47/10
C1508 0.047
C1529 47/10
C1530 0.047
L1506 3.218μ
C1513 680P
C1512 0.01
R1509 1.2K
C1514 18P
R1514 1.5K
R1510 1K
R1513 3.3K
C1515 22P
L1505 100μ
R1512 680
Q1502 2SC2839
VOLTAGE:PLAY(REC)MODE

- ▨▨ ▨▨ ▨▨ : PLAY mode VIDEO SIGNAL
- ············ : PLAY mode C SIGNAL
- — — — — : PLAY mode Y SIGNAL
- ▬▬▬▬ : REC mode Y+C CURRENT

Ⓒ
VHR-2300G

## P.C.B. VD-1 AUDIO CIRCUIT (143-0-233V08349)

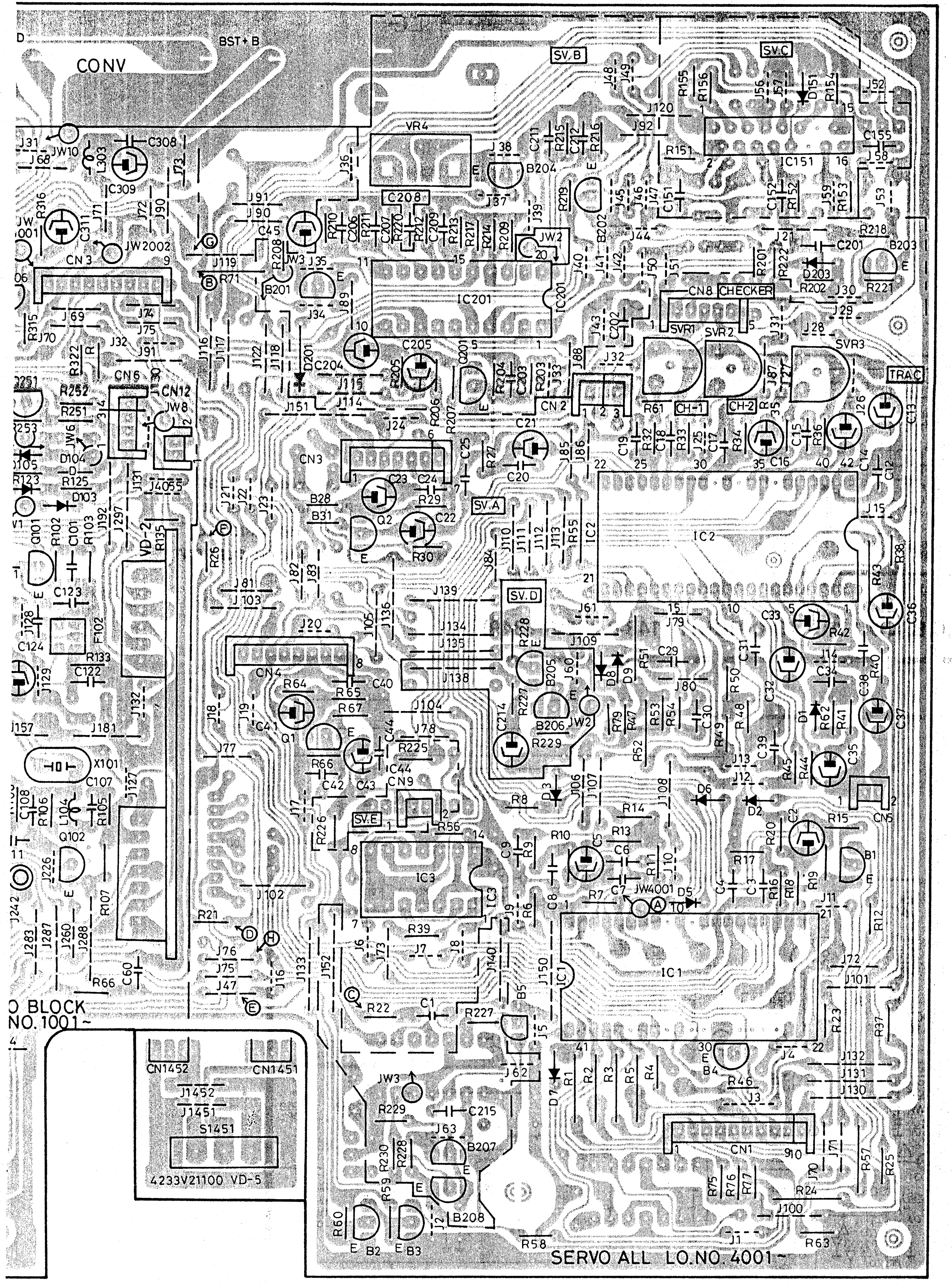

BIAS,REC CURRENT CHECK
CN2002
GND
A.E
F.E
CN2001
A.E and F.E
GND
R/P HEAD
R2001 18K
R2012 100
C2056 0.01
Q2004 2SC945P,Q
Q2001, Q2002 2SD1011R,S,T or 2SC3495
Q2001
R2013 2.2K
R2014 2.2K
Q2003 2SA1016G,F
R2015 10K
R2016 10K
R2017 3.3K
R2018 1.2K
D2001 1SS133
Q2002
R2021 10K
R2020 7.5K
C2011 10/16
BIAS ADJ
SVR2001 100K
C2022 220P
T2001
C2023 0.027
L2003 560μ
R2031 10 (FUSE)
Q2005 2SC536F,G
C2025 0.027
C2024 100/16
Q2006 2SC536F,G
TP2001
TP2002
TP2003
C2026 0.0033
C2027 0.0047
R2032 33K
R2033 33K
C2028 0.0033
IC2001 LA7090
R/P CTL
MUTING CTL
REC MUTE
ALC DET
LINE
ALC
RIPPLE FILTER
EQ
PB MUTE
C2051 0.1
R2002 5.6K
R2003 4.7K
C2052 0.1
C2001 10/16
C2003 4.7/25
R2005 2.7K
C2004 0.018
L2001 10mH
C2005 10/16
R2006 4.7K
R2007 8.2K
C2007 10/16
C2009 47/6.3
R2008 2.2M
R2029 560
C2008 47/6.3
F2051
F2052
C2061 150P
C2013 47/10
C2014 47/10
R2049 15K
L2052
C2015 10/16
C2053 0.001
R2022 6.8K
C2016 820P
C2057 0.01
C2021 47/10
C2017 0.33/50
R2025 6.2K
R2026 2.7K
L2002 27mH
C2019 0.0039
C2020 0.0033
R2024 180K
R2023 150
C2018 0.018
L2053
SVR2002 10K (PB ADJ)
C2054 0.0015
R2028 12K
L2051 560μH
R2027 680
C2058 100P
C2059 100P
C2060 0.01
C2055 0.047
SWD 12V
PB 5V
MUTE
RF OUT
GND
AUDIO OUT
AUDIO IN
CN1010 ④
REC 12V
TO VIDEO CIRCUIT
VOLTAGE:REC(PLAY) MODE

- ············ : PLAY mode AUDIO SIGNAL
- ———— : REC mode AUDIO SIGNAL

16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31

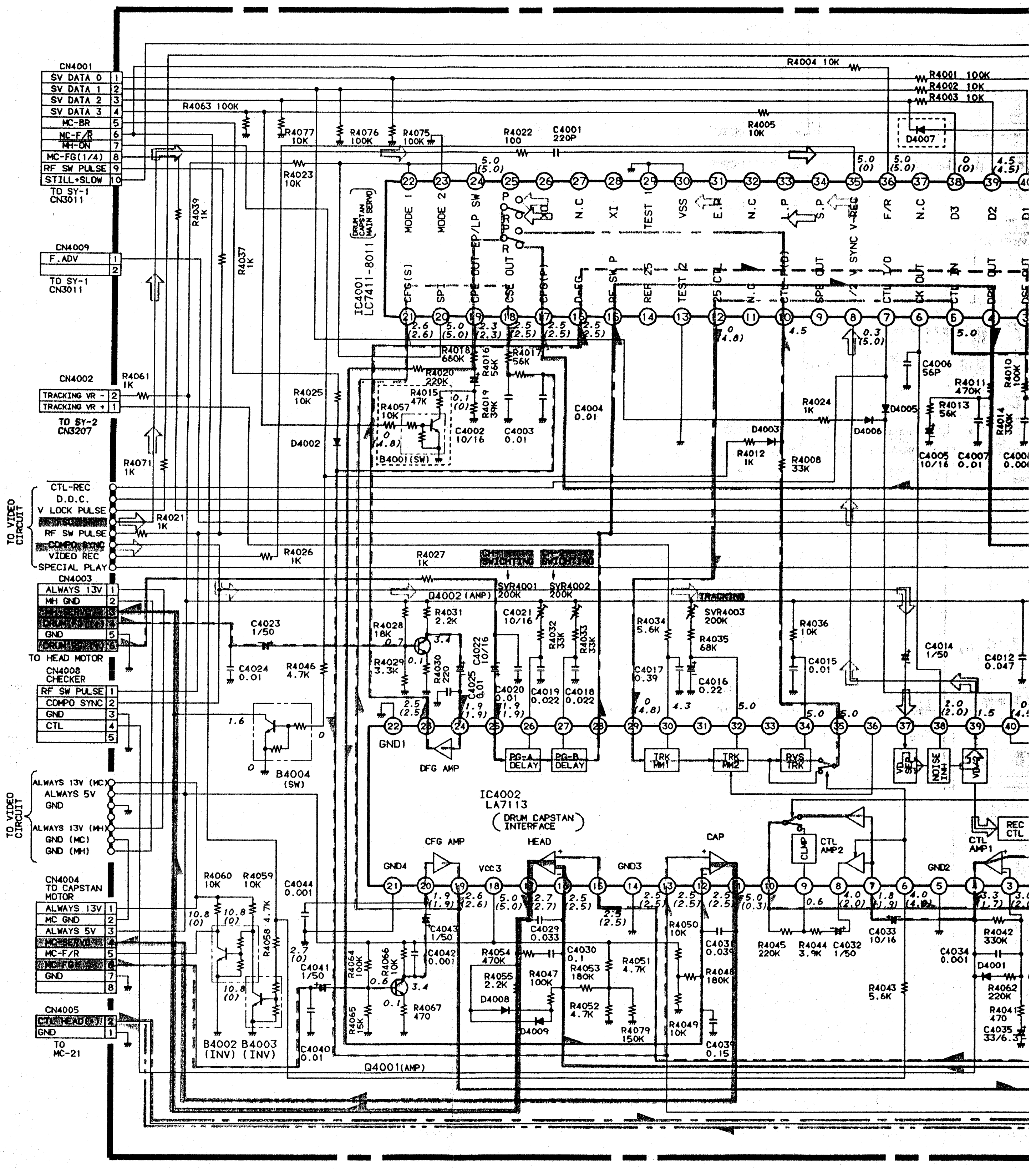
**D** VHR-2300G

## P.C.B. VD-1 SERVO (143-0-233V08349)



CONV
BST+B
SV.B
SV.C
VR4
IC201
IC151
CN8 CHECKER
SVR1
SVR2
SVR3
TRAC
CH-1
CH-2
CN2
CN3
CN4
CN5
CN6
CN9
CN12
SV.A
SV.D
SV.E
IC2
IC3
IC1
VD-2
JW4001
O BLOCK NO.1001
CN1452
CN1451
J1452
J1451
S1451
4233V21100 VD-5
CN1
SERVO ALL LO.NO 4001

## P.C.B. VD-1 SERVO CIRCU



CN4001
SV DATA 0
SV DATA 1
SV DATA 2
SV DATA 3
MC-BR
MC-F/R
MH-ON
MC-FG(1/4)
RF SW PULSE
STILL+SLOW
TO SY-1 CN3011
CN4009
F.ADV
TO SY-1 CN3011
CN4002
TRACKING VR -
TRACKING VR +
TO SY-2 CN3207
TO VIDEO CIRCUIT
CTL-REC
D.O.C.
V LOCK PULSE
RF SW PULSE
VIDEO REC
SPECIAL PLAY
CN4003
ALWAYS 13V
MH GND
GND
TO HEAD MOTOR
CN4008 CHECKER
RF SW PULSE
COMPO SYNC
GND
CTL
TO VIDEO CIRCUIT
ALWAYS 13V (MC)
ALWAYS 5V
GND
ALWAYS 13V (MH)
GND (MC)
GND (MH)
CN4004 TO CAPSTAN MOTOR
ALWAYS 13V
MC GND
ALWAYS 5V
MC-F/R
GND
CN4005
GND
TO MC-21
IC4001 LC7411-8011 (DRUM CAPSTAN MAIN SERVO)
IC4002 LA7113 (DRUM CAPSTAN INTERFACE)
Q4002 (AMP)
Q4001(AMP)
B4001(SW)
B4004 (SW)
B4002 (INV)
B4003 (INV)
SVR4001 200K
SVR4002 200K
SVR4003 200K
TRACKING
DFG AMP
PG-A DELAY
PG-B DELAY
TRK MM1
TRK MM2
RVS TRK
CFG AMP
HEAD
CAP
CTL AMP2
CTL AMP1
REC CTL
GND1
GND2
GND3
GND4
VCC3
MODE 1
MODE 2
XI
TEST 1
VSS
N.C
F/R
D3
D2
R4004 10K
R4001 100K
R4002 10K
R4003 10K
R4063 100K
R4077 10K
R4076 100K
R4075 100K
R4022 100
C4001 220P
R4005 10K
D4007

▬▬▬ : DRUM MOTOR PHASE

▬ ▬ ▬ : DRUM MOTOR FG SIG

▬ · ▬ : DRUM MOTOR PHASE

▇▇▇ : DRUM MOTOR SERVO

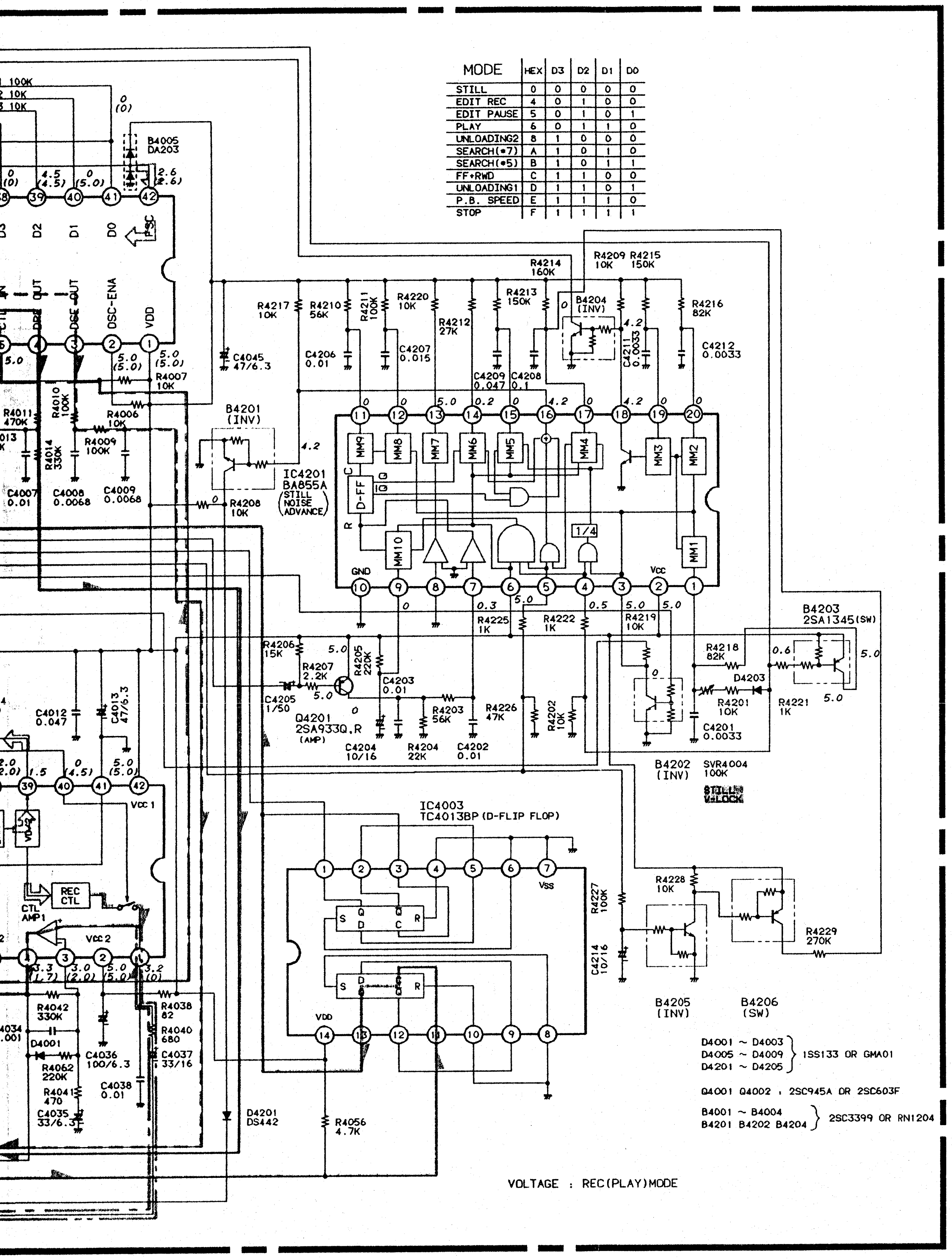
⇨ : FSC

K J I H G F E D C B A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

2-4

## CIRCUIT (143-0-233V08349)


IC4201
BA855A
(STILL NOISE ADVANCE)
IC4003
TC4013BP (D-FLIP FLOP)
Q4201
2SA933Q,R
(AMP)
B4201
(INV)
B4202
(INV)
B4203
2SA1345(SW)
B4204
(INV)
B4205
(INV)
B4206
(SW)
B4005
DA203
SVR4004
100K
STILL LOCK
REC CTL
CTL AMP1
VCC 1
VCC 2
GND
Vcc
VDD
VSS
DSC-ENA
VDD
D-FF
MM1
MM2
MM3
MM4
MM5
MM6
MM7
MM8
MM9
MM10
1/4
R4214 160K
R4209 10K
R4215 150K
R4217 10K
R4210 56K
R4211 100K
R4220 10K
R4212 27K
R4213 150K
R4216 82K
C4045 47/6.3
C4206 0.01
C4207 0.015
C4209 0.047
C4208 0.1
C4211 0.0033
C4212 0.0033
R4007 10K
R4006 10K
R4009 100K
R4010 10K
R4011 470K
R4014 330K
C4007 0.01
C4008 0.0068
C4009 0.0068
R4208 10K
R4206 15K
R4207 2.2K
R4205 220K
C4203 0.01
C4205 1/50
R4203 56K
R4226 47K
R4202 10K
C4204 10/16
R4204 22K
C4202 0.01
R4225 1K
R4222 1K
R4219 10K
R4218 82K
D4203
R4201 10K
R4221 1K
C4201 0.0033
C4012 0.047
C4013 47/6.3
R4228 10K
R4227 100K
C4214 10/16
R4229 270K
R4042 330K
C4034 0.001
D4001
R4062 220K
C4036 100/6.3
R4038 82
R4040 680
C4037 33/16
R4041 470
C4038 0.01
C4035 33/6.3
D4201 DS442
R4056 4.7K
VOLTAGE : REC(PLAY)MODE

| MODE | HEX | D3 | D2 | D1 | D0 |
|---|---|---|---|---|---|
| STILL | 0 | 0 | 0 | 0 | 0 |
| EDIT REC | 4 | 0 | 1 | 0 | 0 |
| EDIT PAUSE | 5 | 0 | 1 | 0 | 1 |
| PLAY | 6 | 0 | 1 | 1 | 0 |
| UNLOADING2 | 8 | 1 | 0 | 0 | 0 |
| SEARCH(*7) | A | 1 | 0 | 1 | 0 |
| SEARCH(*5) | B | 1 | 0 | 1 | 1 |
| FF+RWD | C | 1 | 1 | 0 | 0 |
| UNLOADING1 | D | 1 | 1 | 0 | 1 |
| P.B. SPEED | E | 1 | 1 | 1 | 0 |
| STOP | F | 1 | 1 | 1 | 1 |

D4001 ~ D4003
D4005 ~ D4009 } 1SS133 OR GMA01
D4201 ~ D4205

Q4001 Q4002 : 2SC945A OR 2SC603F

B4001 ~ B4004
B4201 B4202 B4204 } 2SC3399 OR RN1204

VOLTAGE : REC(PLAY)MODE

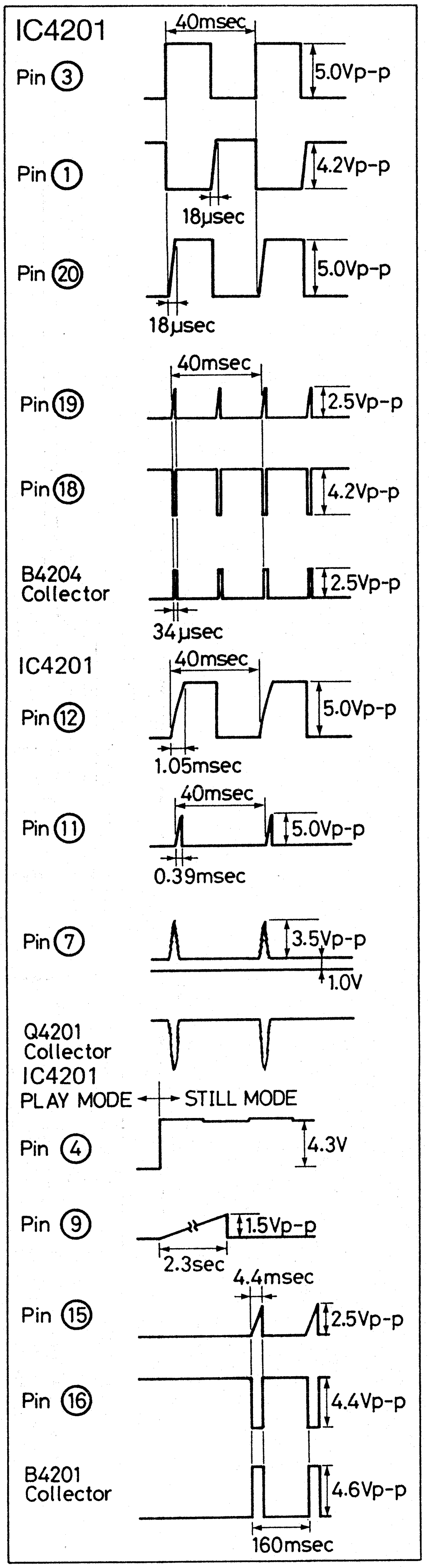
R PHASE CONTROL SIGNAL
R FG SIGNAL
R PHASE COMPARISION SIGNAL
R SERVO

: CAPSTAN MOTOR PHASE CONTROL SIGNAL
: CAPSTAN MOTOR FG SIGNAL
: CONTROL PULSE (PLAY MODE)
: CONTROL PULSE (REC MODE)
: CAPSTAN MOTOR SERVO
⇨ : COMPOSIT SIGNAL

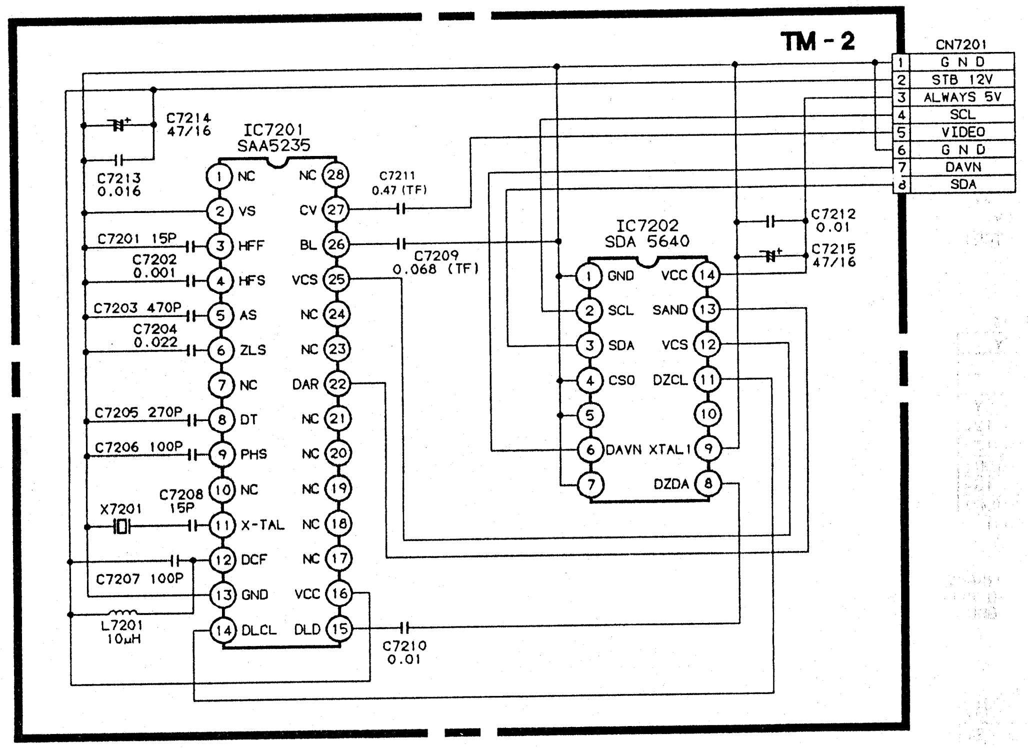
## WAVEFORM OF SERVO

| Pin No. | IC4001 | |
|---|---|---|
| ③ | 8.59KHz | PLAY,REC<br>5Vp-p |
| ④ | 2.15KHz | PLAY,REC<br>5Vp-p |
| ⑤ | 25Hz | REC<br>5Vp-p |
| ⑥ | | PLAY,REC<br>5Vp-p |
| ⑧ ⑭ ⑮ | 25Hz | PLAY,REC<br>5Vp-p |
| ⑩ | 25Hz | REC<br>5Vp-p |
| ⑫ | 25Hz | REC<br>5Vp-p |
| ⑯ | 625Hz | PLAY,REC<br>5Vp-p |
| ⑰ | 750Hz | PLAY,REC<br>5Vp-p |
| ⑱ | 8.59KHz | PLAY,REC<br>5Vp-p |
| ⑲ | 2.15KHz | PLAY,REC<br>5Vp-p |
| ㉑ | 1.5KHz | PLAY,REC<br>5Vp-p |
| ㊷ | 4.43MHz | PLAY,REC<br>0.6Vp-p |
| | IC4003 | |
| ① ② ⑤ | 375Hz | PLAY,REC<br>5Vp-p |
| ⑨ ⑫ | 750Hz | PLAY,REC<br>5Vp-p |

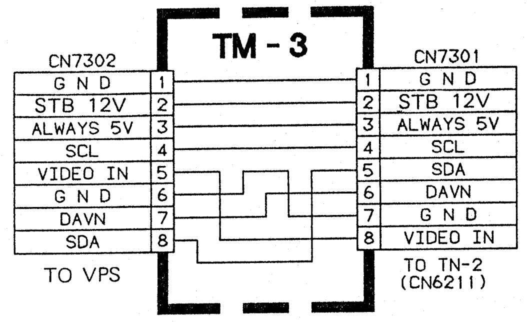
| Pin No. | IC4002 | |
|---|---|---|
| ① | 25Hz | REC<br>4.3Vp-p |
| ④ | 25Hz | REC<br>2.3Vp-p |
| | 25Hz | PLAY<br>1.4Vp-p |
| ⑦ | 25Hz | REC<br>3.4Vp-p |
| | 25Hz | PLAY<br>1.4Vp-p |
| ⑧ | 25Hz | PLAY<br>4.4Vp-p |
| ⑨ | 25Hz | PLAY<br>4Vp-p |
| ⑳ | 1500Hz | PLAY,REC<br>0.2Vp-p |
| ㉑ | 625Hz | PLAY,REC<br>0.1Vp-p |
| ㉕ | 25Hz | PLAY,REC<br>0.2Vp-p |
| ㉖ | 25Hz | PLAY,REC<br>5Vp-p |
| ㉗ | 25Hz | PLAY,REC<br>5Vp-p |
| ㉚ | 25Hz | REC<br>1.5Vp-p |
| | 25Hz<br>13ms | PLAY<br>2.5Vp-p |
| ㉜ | 25Hz<br>27ms | PLAY |
| ㉞ ㉟ | 25Hz | PLAY<br>5Vp-p |
| ㊲ | 50Hz | PLAY,REC<br>4.4Vp-p |

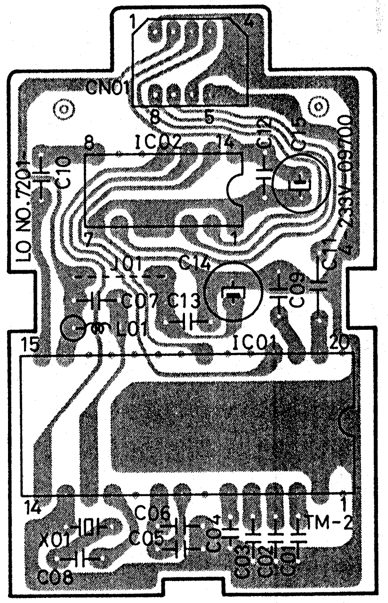

IC4201
Pin ③
40msec
5.0Vp-p
Pin ①
4.2Vp-p
18μsec
Pin ⑳
5.0Vp-p
18μsec
Pin ⑲
40msec
2.5Vp-p
Pin ⑱
4.2Vp-p
B4204 Collector
2.5Vp-p
34μsec
IC4201
Pin ⑫
40msec
5.0Vp-p
1.05msec
Pin ⑪
40msec
5.0Vp-p
0.39msec
Pin ⑦
3.5Vp-p
1.0V
Q4201 Collector
IC4201
PLAY MODE
STILL MODE
Pin ④
4.3V
Pin ⑨
1.5Vp-p
2.3sec
4.4msec
Pin ⑮
2.5Vp-p
Pin ⑯
4.4Vp-p
B4201 Collector
4.6Vp-p
160msec

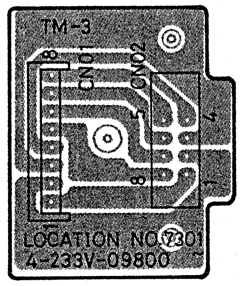
## P.C.B. TM-2 VPS DECORDER CIRCUIT & P.C.B. (149-0-233V09700)


TM - 2
CN7201
1 G N D
2 STB 12V
3 ALWAYS 5V
4 SCL
5 VIDEO
6 G N D
7 DAVN
8 SDA
IC7201 SAA5235
IC7202 SDA 5640
C7214 47/16
C7213 0.016
C7201 15P
C7202 0.001
C7203 470P
C7204 0.022
C7205 270P
C7206 100P
C7208 15P
X7201
C7207 100P
L7201 10μH
C7211 0.47 (TF)
C7209 0.068 (TF)
C7212 0.01
C7215 47/16
C7210 0.01
NC VS HFF HFS AS ZLS NC DT PHS NC X-TAL DCF GND DLCL
NC CV BL VCS NC NC DAR NC NC NC NC NC VCC DLD
GND SCL SDA CSO CS DAVN
VCC SAND VCS DZCL XTAL1 DZDA

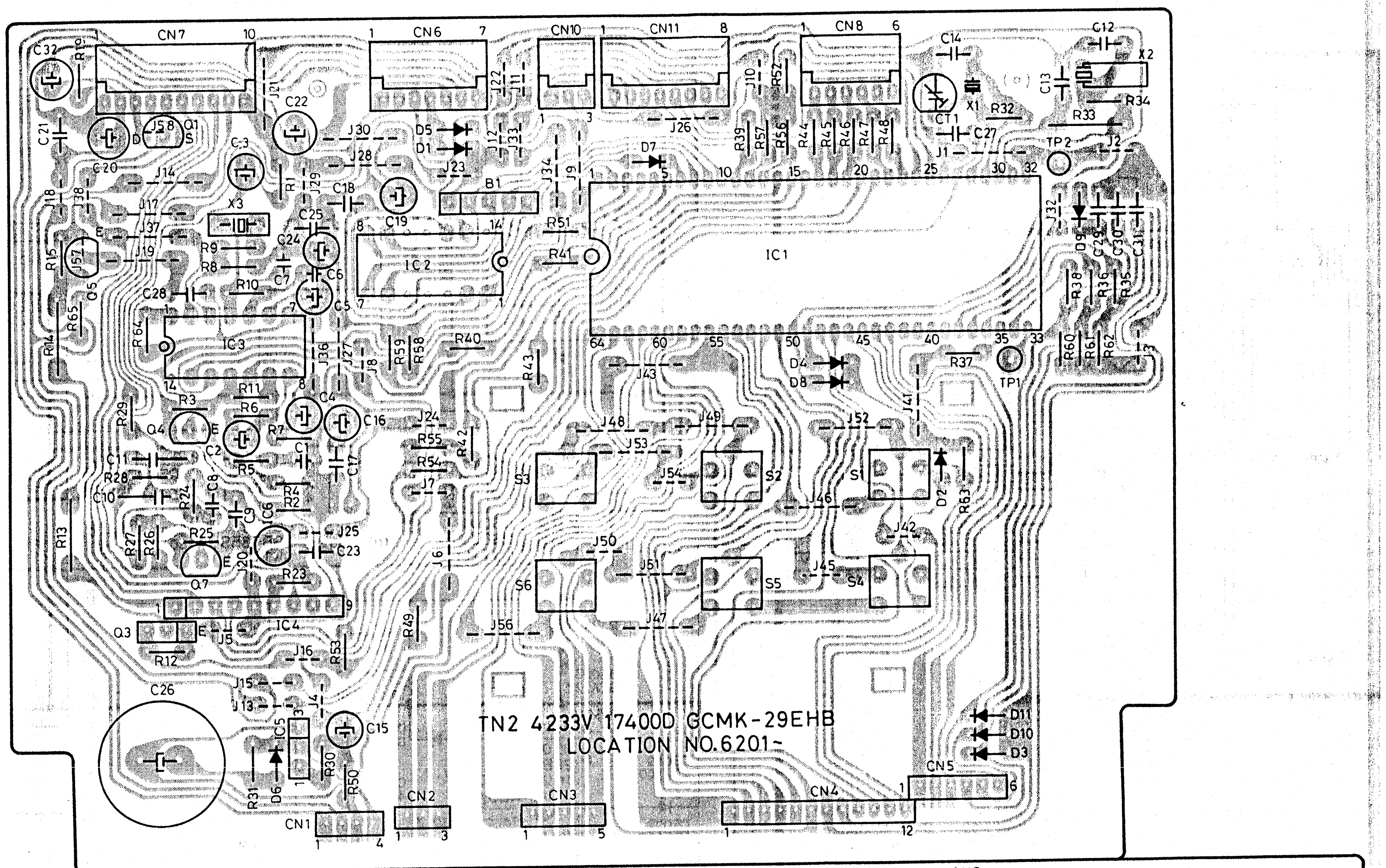
## P.C.B. TM-3 CIRCUIT & P.C.B. (143-0-233V09800)

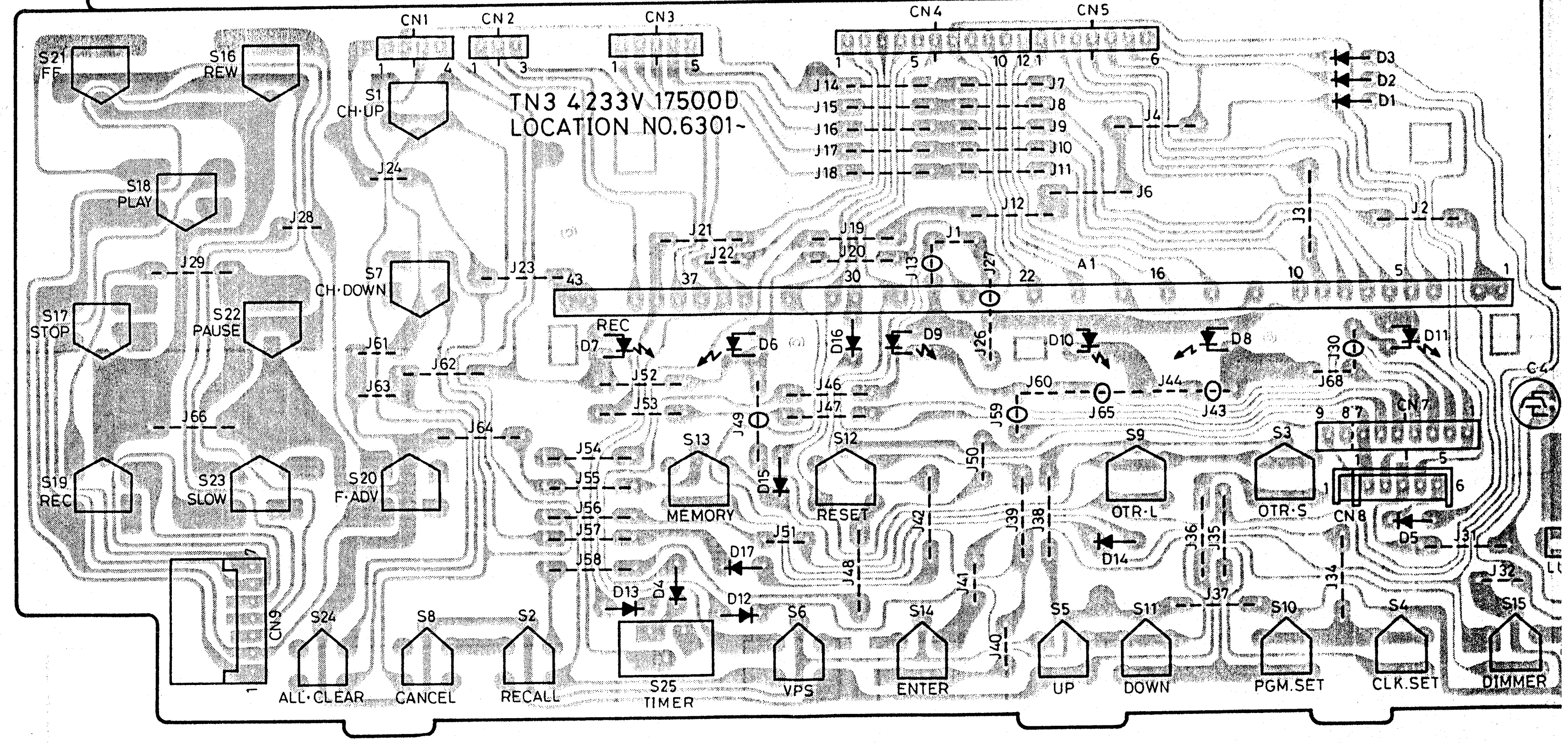

TM - 3
CN7302
1 G N D
2 STB 12V
3 ALWAYS 5V
4 SCL
5 VIDEO IN
6 G N D
7 DAVN
8 SDA
TO VPS
CN7301
1 G N D
2 STB 12V
3 ALWAYS 5V
4 SCL
5 SDA
6 DAVN
7 G N D
8 VIDEO IN
TO TN-2 (CN6211)


CN01
IC02
IC01
LO NO.7201
233V-09700
TM-2
X01
C08 C05 C06 C07 C09 C10 C12 C13 C14
L01
1 4 5 8 14 15 20

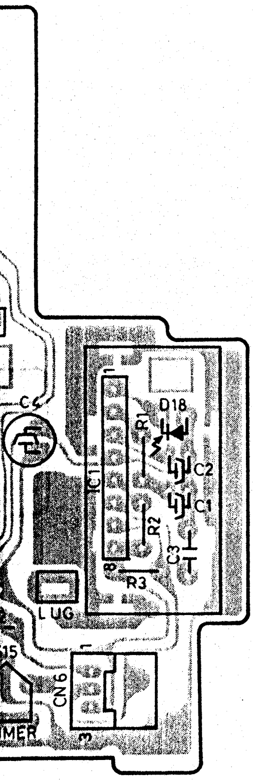

TM-3
CN01
CN02
LOCATION NO.7301
4-233V-09800

## P.C.B. TN-2 TIMER & TUNING CONTROL (143-0-233V17421)
## P.C.B. TN-3 DISPLAY & OPERATION-2 (143-0-233V17521)

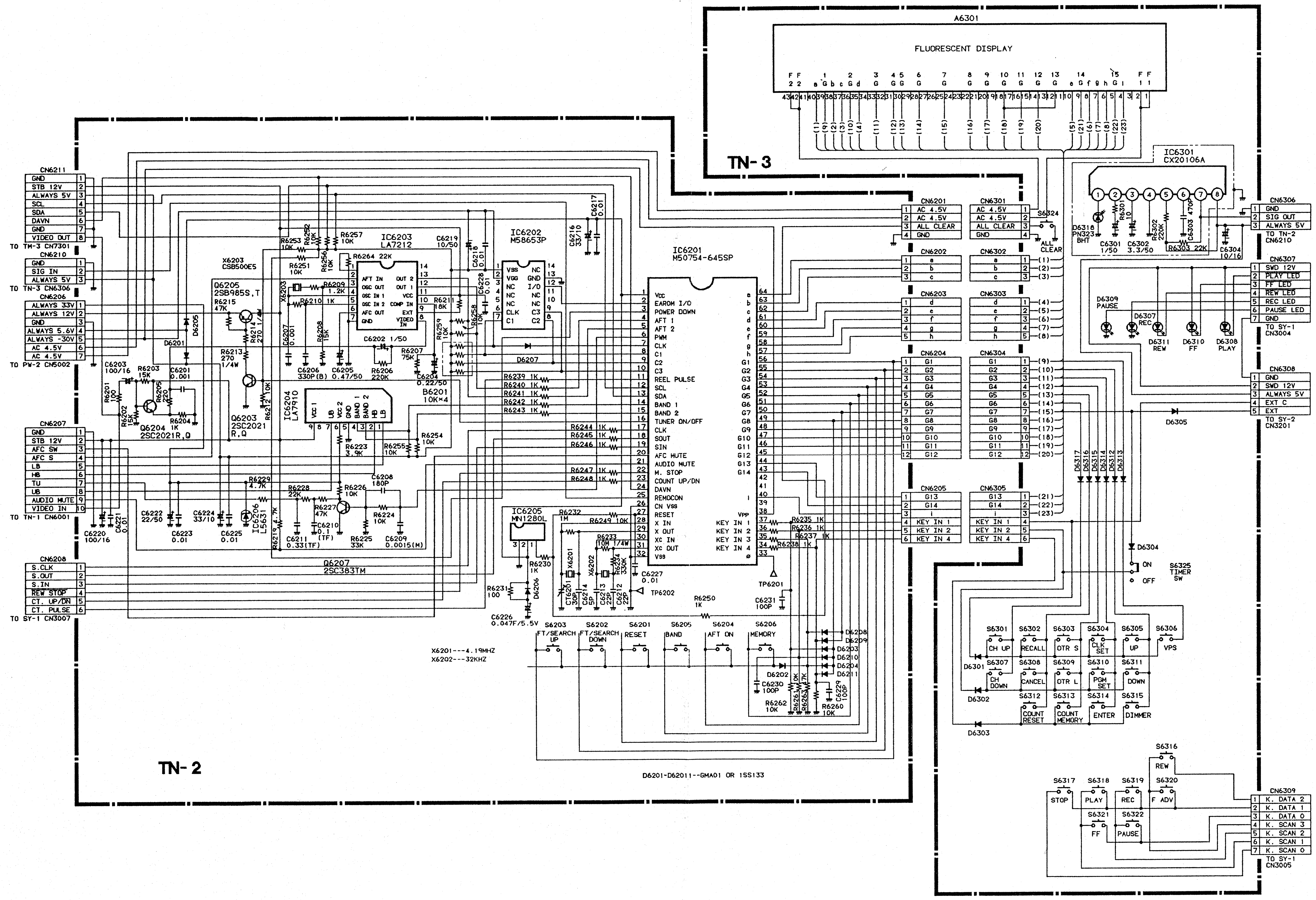

CN7 CN6 CN10 CN11 CN8
IC1 IC2 IC3 IC4
X1 X2 X3
CT1
B1
S1 S2 S3 S4 S5 S6
TP1 TP2
C26
CN1 CN2 CN3 CN4 CN5
D1 D10 D3
TN2 4233V 17400D GCMK-29EHB
LOCATION NO.6201~


TN3 4233V 17500D
LOCATION NO.6301~
CN1 CN2 CN3 CN4 CN5 CN7 CN8 CN9
A1
S21 FF
S16 REW
S1 CH·UP
S18 PLAY
S7 CH·DOWN
S17 STOP
S22 PAUSE
S19 REC
S23 SLOW
S20 F·ADV
S13 MEMORY
S12 RESET
S9 OTR·L
S3 OTR·S
S24 ALL·CLEAR
S8 CANCEL
S2 RECALL
S25 TIMER
S6 VPS
S14 ENTER
S5 UP
S11 DOWN
S10 PGM.SET
S4 CLK.SET
S15 DIMMER
REC D7
D6 D16 D9 D10 D8 D11
D13 D12 D14 D15 D17
D1 D2 D3 D5

## P.C.B. TN-2 TIMER & TUNING CONTROL CIRCUIT (143-0-233V17421)
## P.C.B. TN-3 DISPLAY & OPERATION-2 CIRCUIT (143-0-233V17521)



C4
D18
IC1
R1
C2
C1
R2
C3
R3
LUG
CN6
MER



TN-3
TN-2
A6301
FLUORESCENT DISPLAY
IC6301
CX20106A
IC6201
M50754-645SP
IC6202
M58653P
IC6203
LA7212
IC6204
LA7910
IC6205
MN1280L
CN6211
GND
STB 12V
ALWAYS 5V
SCL
SDA
DAVN
GND
VIDEO OUT
TO TM-3 CN7301
CN6210
GND
SIG IN
ALWAYS 5V
TO TN-3 CN6306
CN6206
ALWAYS 33V
ALWAYS 12V
GND
ALWAYS 5.6V
ALWAYS -30V
AC 4.5V
AC 4.5V
TO PW-2 CN5002
CN6207
GND
STB 12V
AFC SW
AFC S
LB
HB
TU
UB
AUDIO MUTE
VIDEO IN
TO TN-1 CN6001
CN6208
S.CLK
S.OUT
S.IN
REW STOP
CT. UP/DN
CT. PULSE
TO SY-1 CN3007
X6203
CSB500E5
Q6205
2SB985S,T
Q6203
2SC2021
R,Q
Q6204
2SC2021R,Q
Q6207
2SC383TM
B6201
10K×4
Vcc
EAROM I/O
POWER DOWN
AFT 1
AFT 2
PWM
CLK
C1
C2
C3
REEL PULSE
SCL
SDA
BAND 1
BAND 2
TUNER ON/OFF
CLK
SOUT
SIN
AFC MUTE
AUDIO MUTE
M. STOP
COUNT UP/DN
DAVN
REMOCON
CN Vss
RESET
X IN
X OUT
Xc IN
Xc OUT
Vss
VPP
KEY IN 1
KEY IN 2
KEY IN 3
KEY IN 4
TP6201
TP6202
S6203
FT/SEARCH UP
S6202
FT/SEARCH DOWN
S6201
RESET
S6205
BAND
S6204
AFT ON
S6206
MEMORY
X6201---4.19MHZ
X6202---32KHZ
D6201-D62011--GMA01 OR 1SS133
CN6201
AC 4.5V
AC 4.5V
ALL CLEAR
GND
CN6301
S6324
ALL CLEAR
CN6202
CN6302
CN6203
CN6303
CN6204
CN6304
CN6205
CN6305
G13
G14
KEY IN 1
KEY IN 2
KEY IN 4
CN6306
GND
SIG OUT
ALWAYS 5V
TO TN-2 CN6210
CN6307
SWD 12V
PLAY LED
FF LED
REW LED
REC LED
PAUSE LED
GND
TO SY-1 CN3004
CN6308
GND
SWD 12V
ALWAYS 5V
EXT C
EXT
TO SY-2 CN3201
D6318
PN323
BHT
D6309
PAUSE
D6307
REC
D6311
REW
D6310
FF
D6308
PLAY
D6305
D6304
ON
OFF
S6325
TIMER SW
S6301
CH UP
S6302
RECALL
S6303
OTR S
S6304
CLK SET
S6305
UP
S6306
VPS
S6307
CH DOWN
S6308
CANCEL
S6309
OTR L
S6310
PGM SET
S6311
DOWN
S6312
COUNT RESET
S6313
COUNT MEMORY
S6314
ENTER
S6315
DIMMER
D6301
D6302
D6303
S6316
REW
S6317
STOP
S6318
PLAY
S6319
REC
S6320
F ADV
S6321
FF
S6322
PAUSE
CN6309
K. DATA 2
K. DATA 1
K. DATA 0
K. SCAN 3
K. SCAN 2
K. SCAN 1
K. SCAN 0
TO SY-1 CN3005

Ⓔ VHR-2300G

K

J

I

H

G

F ⓕ VHR-2300G

E

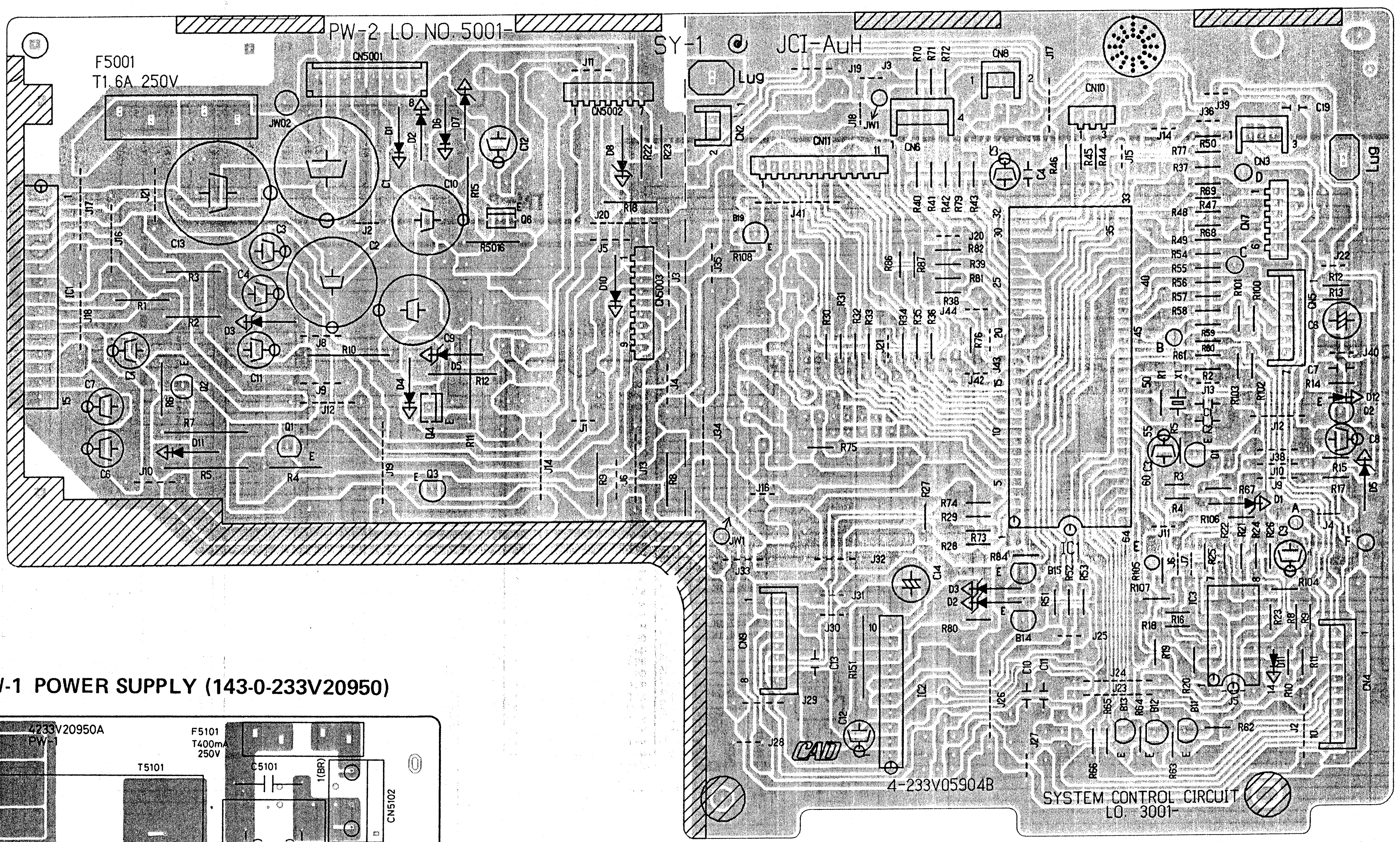
D

C

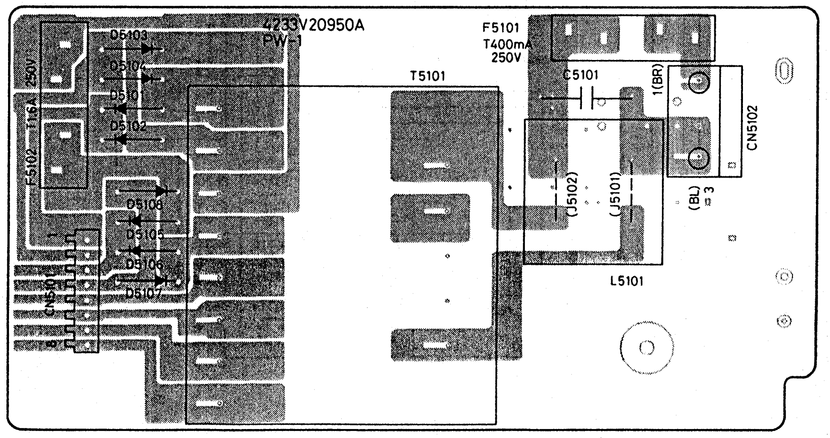
B

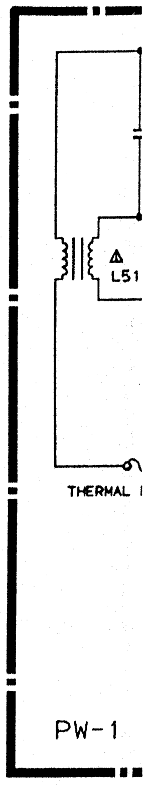
A

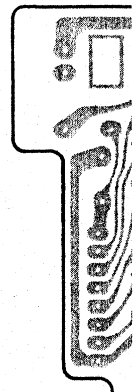
## P.C.B. SY-1 SYSTEM CONTROL, POWER SUPPLY (143-0-233V05904)


PW-2 LO NO 5001
SY-1
JCI-AuH
F5001
T1.6A 250V
Lug
CN5001
CN5002
CN5003
JW02
CN10
CN8
CN3
CN11
IC1
IC2
Lug
4-233V05904B
SYSTEM CONTROL CIRCUIT
LO. 3001
CAD

## P.C.B. PW-1 POWER SUPPLY (143-0-233V20950)


4233V20950A
PW-1
F5101
T400mA
250V
T5101
C5101
1(BR)
CN5102
(BL)
=3
(J5102)
(J5101)
L5101
F5102
T1.6A 250V
D5101
D5102
D5103
D5104
D5105
D5106
D5107
D5108
CN5101

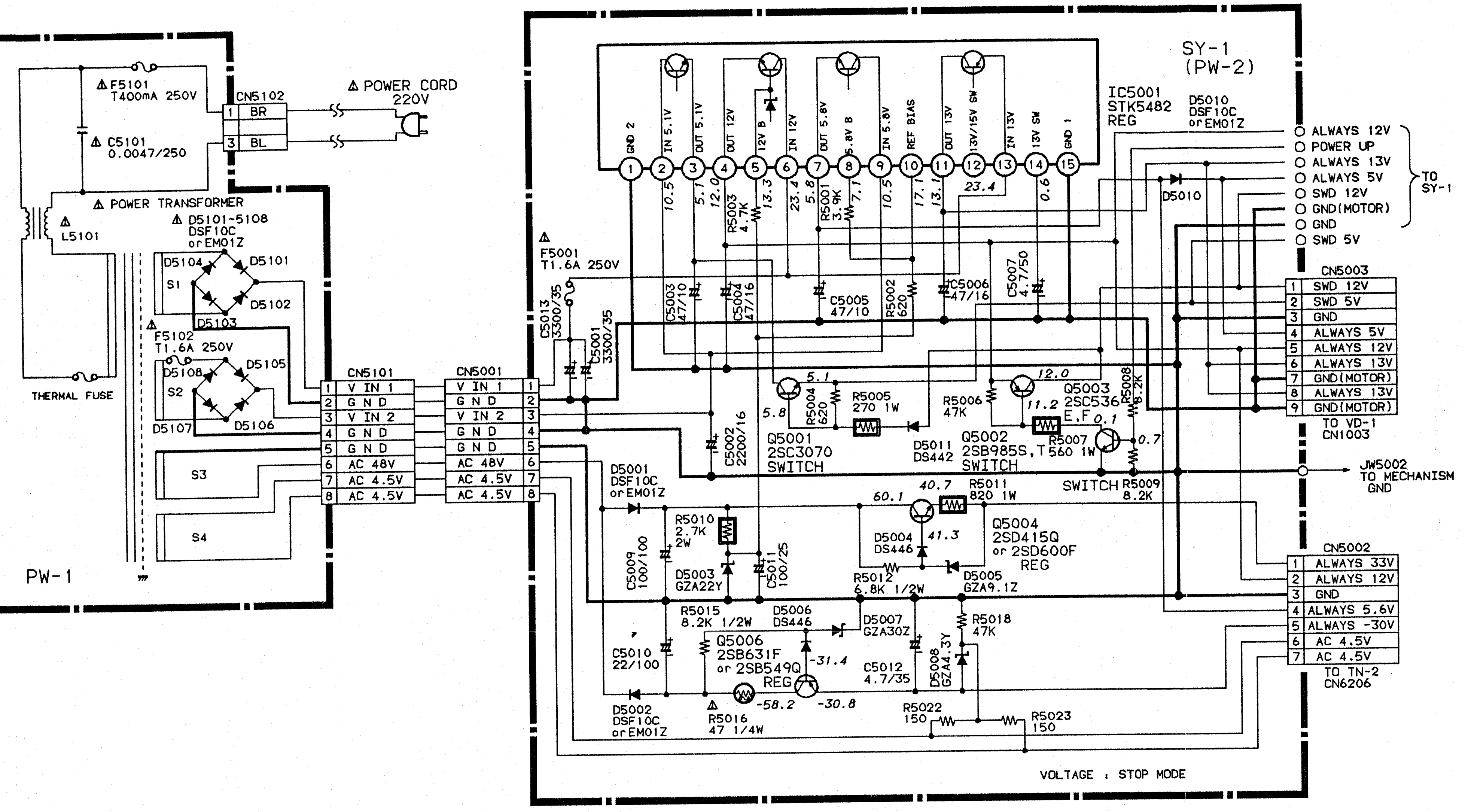

L51
THERMAL
PW-1



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

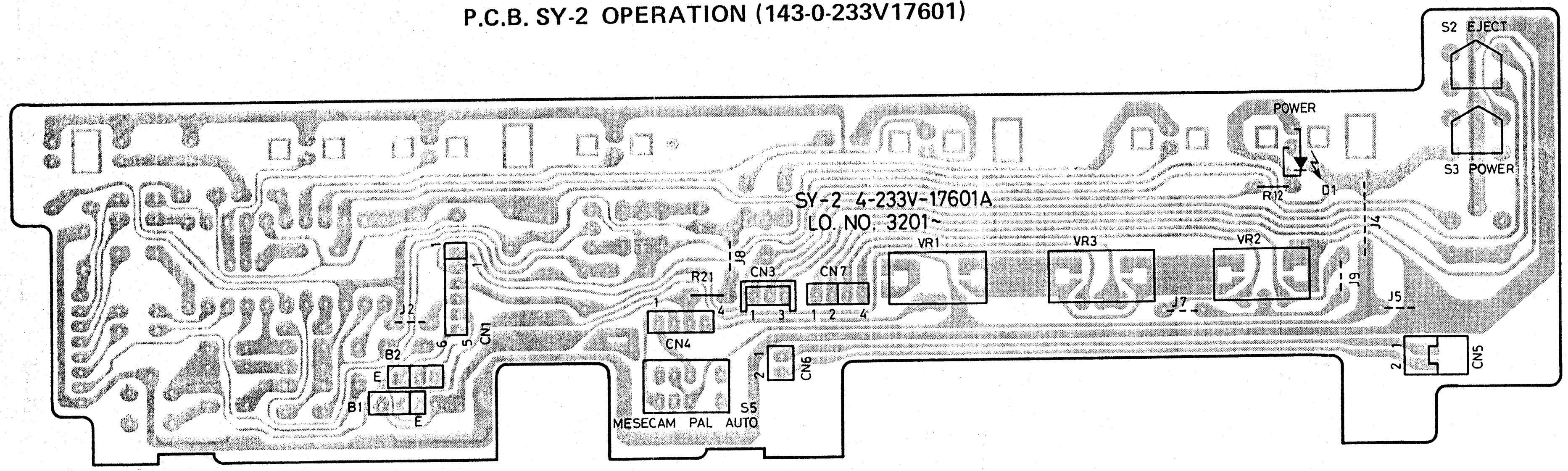
2-6

## P.C.B. PW-1, SY-1 POWER SUPPLY CIRCUIT (PW-1 143-0-233V20950)
## (SY-1 143-0-233V05904)


⚠ F5101
T400mA 250V
⚠ C5101
0.0047/250
CN5102
1 BR
3 BL
⚠ POWER CORD
220V
⚠ POWER TRANSFORMER
⚠
L5101
⚠ D5101~5108
DSF10C
or EM01Z
D5104
D5101
S1
D5102
D5103
⚠
F5102
T1.6A 250V
D5108
D5105
S2
D5107
D5106
S3
S4
THERMAL FUSE
PW-1
CN5101
1 V IN 1
2 GND
3 V IN 2
4 GND
5 GND
6 AC 48V
7 AC 4.5V
8 AC 4.5V
CN5001
V IN 1 1
GND 2
V IN 2 3
GND 4
GND 5
AC 48V 6
AC 4.5V 7
AC 4.5V 8
SY-1
(PW-2)
IC5001
STK5482
REG
D5010
DSF10C
or EM01Z
GND 2
IN 5.1V
OUT 5.1V
OUT 12V
12V B
IN 12V
OUT 5.8V
5.8V B
IN 5.8V
REF BIAS
OUT 13V
13V/15V SW
IN 13V
13V SW
GND 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
10.5
5.1
12.0
13.3
23.4
5.8
7.1
10.5
17.1
13.1
23.4
0.6
R5003
4.7K
R5001
3.9K
D5010
⚠
F5001
T1.6A 250V
C5013
3300/35
C5001
3300/35
C5003
47/10
C5004
47/16
C5005
47/10
R5002
620
C5006
47/16
C5007
4.7/50
C5002
2200/16
5.1
5.8
R5004
620
R5005
270 1W
Q5001
2SC3070
SWITCH
D5011
DS442
R5006
47K
12.0
11.2
Q5003
2SC536
E.F
0.1
R5008
8.2K
0.7
Q5002
2SB985S,T
SWITCH
R5007
560 1W
SWITCH
R5009
8.2K
D5001
DSF10C
or EM01Z
60.1
40.7
R5011
820 1W
R5010
2.7K
2W
C5009
100/100
D5003
GZA22Y
C5011
100/25
D5004
DS446
41.3
Q5004
2SD415Q
or 2SD600F
REG
R5012
6.8K 1/2W
D5005
GZA9.1Z
R5015
8.2K 1/2W
D5006
DS446
D5007
GZA30Z
R5018
47K
C5010
22/100
Q5006
2SB631F
or 2SB549Q
REG
-31.4
C5012
4.7/35
D5008
GZA4.3Y
D5002
DSF10C
or EM01Z
⚠
R5016
47 1/4W
-58.2
-30.8
R5022
150
R5023
150
ALWAYS 12V
POWER UP
ALWAYS 13V
ALWAYS 5V
SWD 12V
GND(MOTOR)
GND
SWD 5V
TO SY-1
CN5003
1 SWD 12V
2 SWD 5V
3 GND
4 ALWAYS 5V
5 ALWAYS 12V
6 ALWAYS 13V
7 GND(MOTOR)
8 ALWAYS 13V
9 GND(MOTOR)
TO VD-1
CN1003
JW5002
TO MECHANISM
GND
CN5002
1 ALWAYS 33V
2 ALWAYS 12V
3 GND
4 ALWAYS 5.6V
5 ALWAYS -30V
6 AC 4.5V
7 AC 4.5V
TO TN-2
CN6206

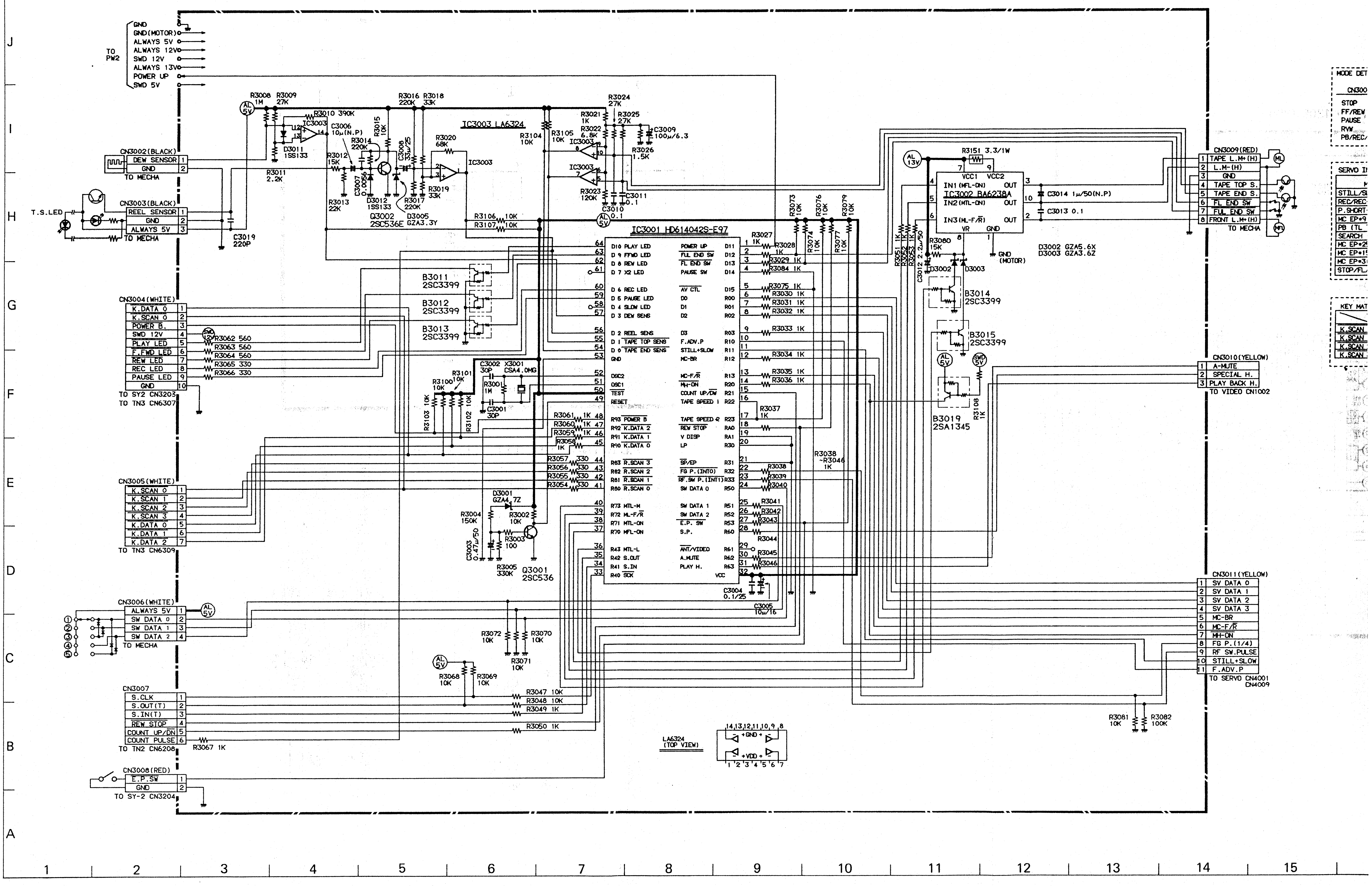
VOLTAGE : STOP MODE

## P.C.B. SY-2 OPERATION (143-0-233V17601)


S2 EJECT
S3 POWER
POWER
D1
R12
SY-2 4-233V-17601A
LO. NO. 3201
J4
J8
J9
J7
J5
J2
VR1
VR3
VR2
R21
CN3
CN7
CN4
CN6
CN5
CN1
B2
B1
E
S5
MESECAM PAL AUTO

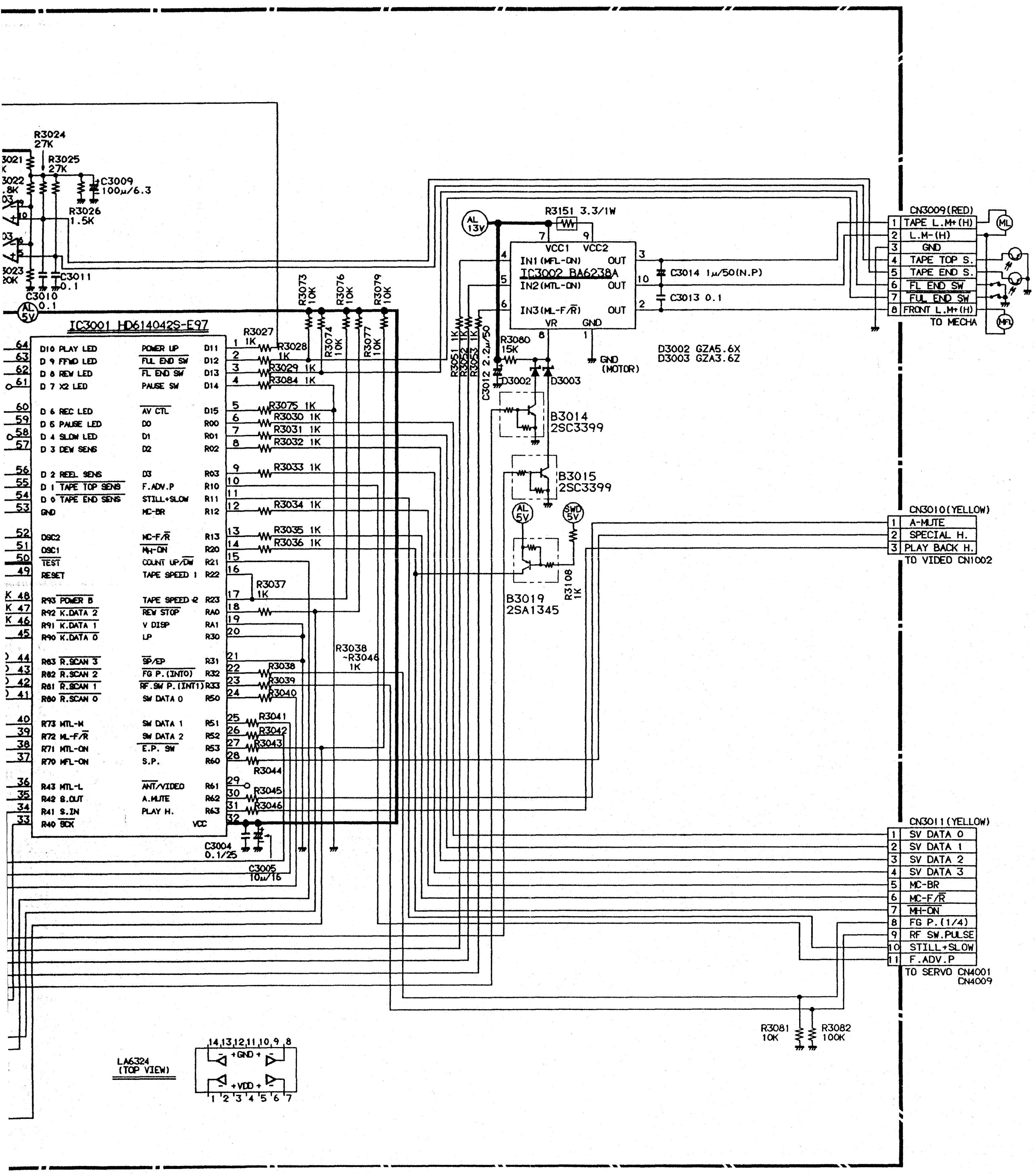
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

# P.C.B. SY-1 SYSTEM CONTROL CIRCUIT (143-0-233V05904)



TO PW2
GND
GND(MOTOR)
ALWAYS 5V
ALWAYS 12V
SWD 12V
ALWAYS 13V
POWER UP
SWD 5V
CN3002(BLACK)
DEW SENSOR
TO MECHA
CN3003(BLACK)
REEL SENSOR
T.S.LED
C3019 220P
CN3004(WHITE)
K.DATA 0
K.SCAN 0
POWER B.
SWD 12V
PLAY LED
F.FWD LED
REW LED
REC LED
PAUSE LED
TO SY2 CN3203
TO TN3 CN6307
CN3005(WHITE)
K.SCAN 0
K.SCAN 1
K.SCAN 2
K.SCAN 3
K.DATA 0
K.DATA 1
K.DATA 2
TO TN3 CN6309
CN3006(WHITE)
ALWAYS 5V
SW DATA 0
SW DATA 1
SW DATA 2
CN3007
S.CLK
S.OUT(T)
S.IN(T)
REW STOP
COUNT UP/DN
COUNT PULSE
TO TN2 CN6208
R3067 1K
CN3008(RED)
E.P.SW
TO SY-2 CN3204
IC3003 LA6324
D3011 1SS133
Q3002 2SC536E
D3005 GZA3.3Y
D3012 1SS133
B3011 2SC3399
B3012 2SC3399
B3013 2SC3399
C3002 30P
X3001 CSA4.0MG
C3001 30P
D3001 GZA4.7Z
C3003 0.47μ/50
Q3001 2SC536
IC3001 HD614042S-E97
C3004 0.1/25
C3005 10μ/16
LA6324 (TOP VIEW)
IC3002 BA6238A
R3151 3.3/1W
C3014 1μ/50(N.P)
C3013 0.1
D3002 GZA5.6X
D3003 GZA3.6Z
B3014 2SC3399
B3015 2SC3399
B3019 2SA1345
CN3009(RED)
TAPE L.M+(H)
L.M-(H)
GND
TAPE TOP S.
TAPE END S.
FL END SW
FUL END SW
FRONT L.M+(H)
TO MECHA
CN3010(YELLOW)
A-MUTE
SPECIAL H.
PLAY BACK H.
TO VIDEO CN1002
CN3011(YELLOW)
SV DATA 0
SV DATA 1
SV DATA 2
SV DATA 3
MC-BR
MC-F/R
MH-ON
FG P.(1/4)
RF SW.PULSE
STILL+SLOW
F.ADV.P
TO SERVO CN4001 CN4009
R3081 10K
R3082 100K
MODE DET
SERVO
KEY MAT

## STEM CONTROL CIRCUIT (143-0-233V05904)


R3024
27K
R3025
27K
C3009
100µ/6.3
R3026
1.5K
3021
3022
.8K
3023
20K
C3011
0.1
C3010
0.1
AL 5V
IC3001 HD614042S-E97
64 D10 PLAY LED
63 D 9 FFWD LED
62 D 8 REW LED
61 D 7 X2 LED
60 D 6 REC LED
59 D 5 PAUSE LED
58 D 4 SLOW LED
57 D 3 DEW SENS
56 D 2 REEL SENS
55 D 1 TAPE TOP SENS
54 D 0 TAPE END SENS
53 GND
52 OSC2
51 OSC1
50 TEST
49 RESET
48 R93 POWER B
47 R92 K.DATA 2
46 R91 K.DATA 1
45 R90 K.DATA 0
44 R83 R.SCAN 3
43 R82 R.SCAN 2
42 R81 R.SCAN 1
41 R80 R.SCAN 0
40 R73 MTL-M
39 R72 ML-F/R
38 R71 MTL-ON
37 R70 MFL-ON
36 R43 MTL-L
35 R42 S.OUT
34 R41 S.IN
33 R40 SCK
POWER UP D11 1
FUL END SW D12 2
FL END SW D13 3
PAUSE SW D14 4
AV CTL D15 5
D0 R00 6
D1 R01 7
D2 R02 8
D3 R03 9
F.ADV.P R10 10
STILL+SLOW R11 11
MC-BR R12 12
MC-F/R R13 13
MH-ON R20 14
COUNT UP/DW R21 15
TAPE SPEED 1 R22 16
TAPE SPEED 2 R23 17
REW STOP RA0 18
V DISP RA1 19
LP R30 20
SP/EP R31 21
FG P.(INT0) R32 22
RF.SW P.(INT1) R33 23
SW DATA 0 R50 24
SW DATA 1 R51 25
SW DATA 2 R52 26
E.P. SW R53 27
S.P. R60 28
ANT/VIDEO R61 29
A.MUTE R62 30
PLAY H. R63 31
VCC 32
R3027 1K
R3028 1K
R3029 1K
R3084 1K
R3075 1K
R3030 1K
R3031 1K
R3032 1K
R3033 1K
R3034 1K
R3035 1K
R3036 1K
R3037 1K
R3038 ~R3046 1K
R3038
R3039
R3040
R3041
R3042
R3043
R3044
R3045
R3046
R3073 10K
R3074 10K
R3076 10K
R3077 10K
R3079 10K
C3004 0.1/25
C3005 10µ/16
AL 13V
R3151 3.3/1W
IC3002 BA6238A
VCC1 VCC2
IN1 (MFL-ON) OUT
IN2 (MTL-ON) OUT
IN3 (ML-F/R) OUT
VR GND
C3014 1µ/50(N.P)
C3013 0.1
R3080 15K
R3051 1K
R3052 1K
R3053 1K
C3012 2.2µ/50
D3002
D3003
GND (MOTOR)
D3002 GZA5.6X
D3003 GZA3.6Z
B3014 2SC3399
B3015 2SC3399
AL 5V
SWD 5V
B3019 2SA1345
R3108 1K
CN3009(RED)
1 TAPE L.M+(H)
2 L.M-(H)
3 GND
4 TAPE TOP S.
5 TAPE END S.
6 FL END SW
7 FUL END SW
8 FRONT L.M+(H)
TO MECHA
ML
MFL
CN3010(YELLOW)
1 A-MUTE
2 SPECIAL H.
3 PLAY BACK H.
TO VIDEO CN1002
CN3011(YELLOW)
1 SV DATA 0
2 SV DATA 1
3 SV DATA 2
4 SV DATA 3
5 MC-BR
6 MC-F/R
7 MH-ON
8 FG P.(1/4)
9 RF SW.PULSE
10 STILL+SLOW
11 F.ADV.P
TO SERVO CN4001 CN4009
R3081 10K
R3082 100K
LA6324 (TOP VIEW)
14 13 12 11 10 9 8
+GND+
+VDD+
1 2 3 4 5 6 7

MODE DETECT SWITCH

| CN3006 | SW1<br>2 | SW2<br>3 | SW3<br>4 | HEX |
|---|---|---|---|---|
| STOP | 1 | 0 | 0 | 1 |
| FF/REW | 0 | 1 | 0 | 2 |
| PAUSE | 1 | 1 | 0 | 3 |
| RVW | 0 | 0 | 1 | 4 |
| PB/REC/FCUE | 1 | 0 | 1 | 5 |

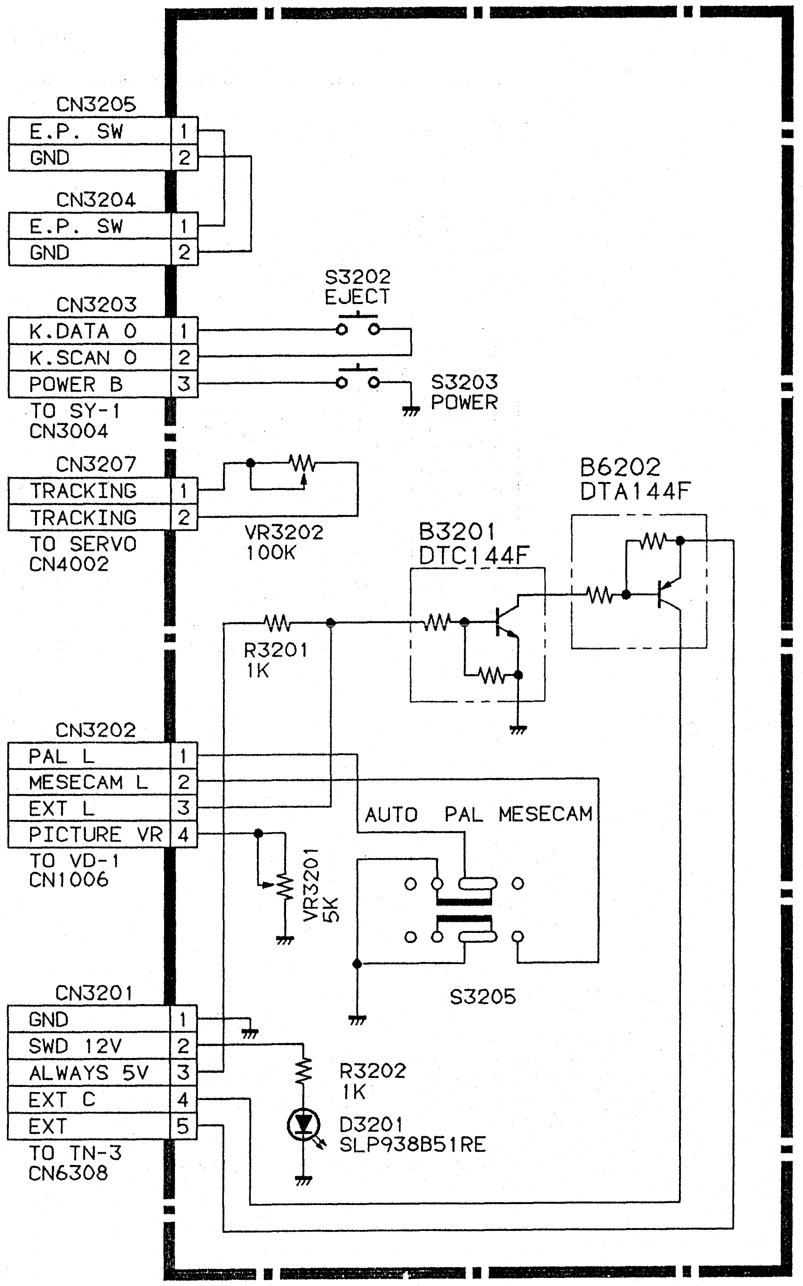
SERVO INTERFACE

| MODE | D3 | D2 | D1 | D0 | HEX |
|---|---|---|---|---|---|
| STILL/SLOW/F.ADV | 0 | 0 | 0 | 0 | 0 |
| REC/REC-EDIT | 0 | 1 | 0 | 0 | 4 |
| P.SHORT-RVW/PAUSE | 0 | 1 | 0 | 1 | 5 |
| MC EP*9(T.UL) | 1 | 0 | 0 | 0 | 8 |
| PB (TL T.UL ETC) | 0 | 1 | 1 | 0 | 6 |
| SEARCH (CUE RVW ETC) | 1 | 0 | 1 | 1 | B |
| MC EP*25(FF REW ETC) | 1 | 1 | 0 | 0 | C |
| MC EP*15(T.UL ETC) | 1 | 1 | 0 | 1 | D |
| MC EP*3(TL ETC) | 1 | 1 | 1 | 0 | E |
| STOP/FL/F.UL/C-OUT) | 1 | 1 | 1 | 1 | F |

KEY MATRIX

|  | K.DATA 0 | K.DATA 1 | K.DATA 2 |
|---|---|---|---|
| K.SCAN 0 | EJECT B. | STOP B. | ANT.VIDEO B. |
| K.SCAN 1 | FF B. | PLAY B. |  |
| K.SCAN 2 | PAUSE B. | REC B. |  |
| K.SCAN 3 |  | F.ADV B. | REW B. |

## P.C.B. SY-2 OPERATION CIRCUIT (143-0-233V17601)


CN3205
E.P. SW 1
GND 2
CN3204
E.P. SW 1
GND 2
CN3203
K.DATA 0 1
K.SCAN 0 2
POWER B 3
TO SY-1 CN3004
S3202 EJECT
S3203 POWER
CN3207
TRACKING 1
TRACKING 2
TO SERVO CN4002
VR3202 100K
B3201 DTC144F
B6202 DTA144F
R3201 1K
CN3202
PAL L 1
MESECAM L 2
EXT L 3
PICTURE VR 4
TO VD-1 CN1006
VR3201 5K
AUTO PAL MESECAM
S3205
CN3201
GND 1
SWD 12V 2
ALWAYS 5V 3
EXT C 4
EXT 5
TO TN-3 CN6308
R3202 1K
D3201 SLP938B51RE

G
VHR-2300G

8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

K

J

I

H

G

F

E

D

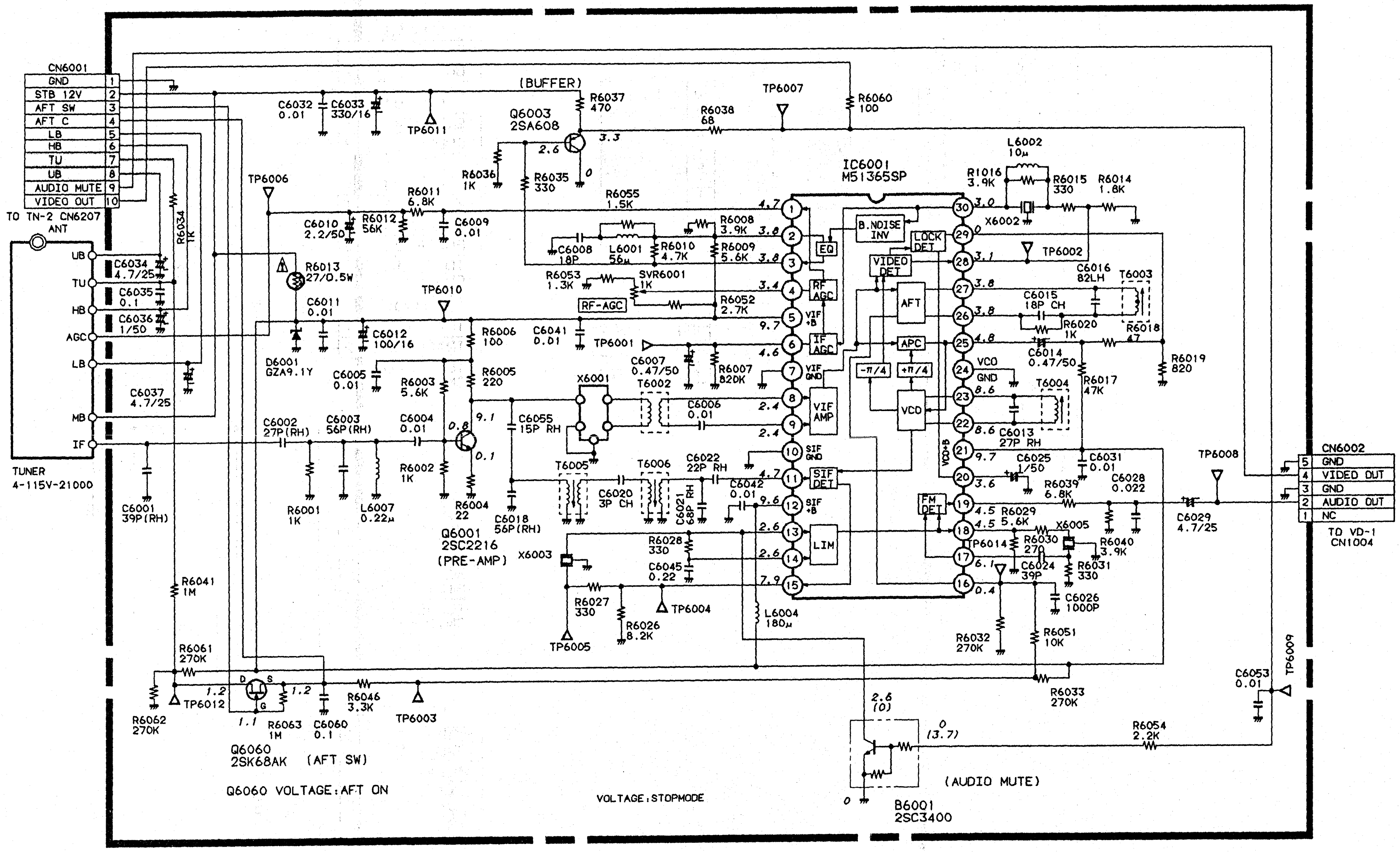
C

B

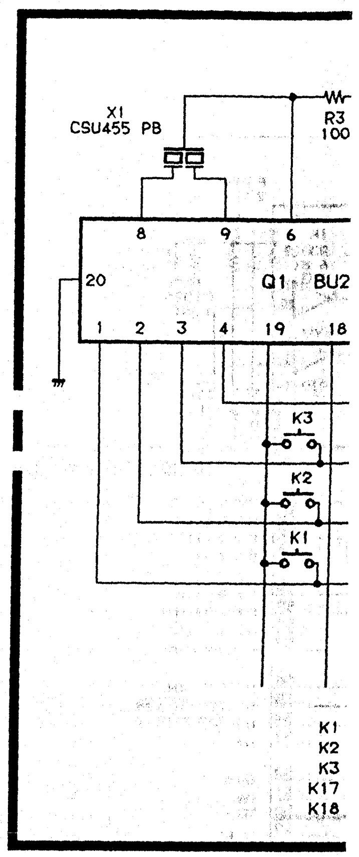
A

**VHR-2300G**

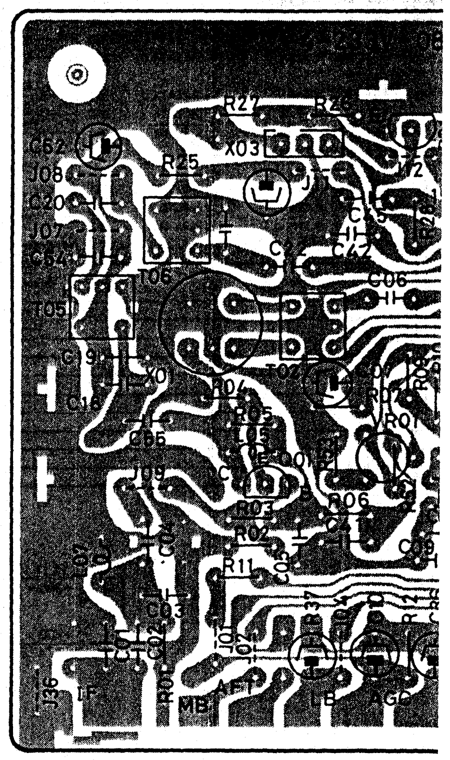
## P.C.B. TN-1 TUNER I.F. CIRCUIT (143-9-4300-78900)


CN6001
1 GND
2 STB 12V
3 AFT SW
4 AFT C
5 LB
6 HB
7 TU
8 UB
9 AUDIO MUTE
10 VIDEO OUT
TO TN-2 CN6207
ANT
UB
TU
HB
AGC
LB
MB
IF
TUNER
4-115V-21000
C6034 4.7/25
C6035 0.1
C6036 1/50
C6037 4.7/25
C6001 39P(RH)
R6034 1K
R6041 1M
R6061 270K
R6062 270K
TP6012
1.2
1.1
Q6060
2SK68AK
(AFT SW)
R6063 1M
C6060 0.1
R6046 3.3K
TP6003
Q6060 VOLTAGE:AFT ON
C6032 0.01
C6033 330/16
TP6011
TP6006
C6010 2.2/50
R6012 56K
R6011 6.8K
C6009 0.01
R6013 27/0.5W
C6011 0.01
C6012 100/16
D6001 GZA9.1Y
TP6010
C6005 0.01
R6003 5.6K
R6006 100
R6005 220
C6041 0.01
C6002 27P(RH)
C6003 56P(RH)
C6004 0.01
R6002 1K
R6001 1K
L6007 0.22μ
R6004 22
Q6001
2SC2216
(PRE-AMP)
C6055 15P RH
C6018 56P(RH)
9.1
0.8
0.1
(BUFFER)
Q6003
2SA608
R6037 470
R6036 1K
R6035 330
2.6
3.3
0
R6038 68
TP6007
R6060 100
R6055 1.5K
C6008 18P
L6001 56μ
R6010 4.7K
R6008 3.9K
R6009 5.6K
R6053 1.3K
SVR6001 1K
RF-AGC
R6052 2.7K
TP6001
C6007 0.47/50
R6007 820K
X6001
T6002
C6006 0.01
T6005
T6006
C6020 3P CH
C6022 22P RH
C6021 68P RH
C6042 0.01
X6003
R6028 330
C6045 0.22
R6027 330
R6026 8.2K
TP6004
TP6005
L6004 180μ
IC6001
M51365SP
EQ
RF AGC
IF AGC
VIF +B
VIF GND
VIF AMP
SIF GND
SIF DET
SIF +B
LIM
B.NOISE INV
LOCK DET
VIDEO DET
AFT
APC
-π/4
+π/4
VCO
FM DET
VCO GND
VCO+B
4.7
3.8
3.8
3.4
9.7
4.6
2.4
2.4
4.7
9.6
2.6
2.6
7.9
3.0
0
3.1
3.8
3.8
4.8
8.6
8.6
9.7
3.6
4.5
4.5
6.1
0.4
L6002 10μ
R1016 3.9K
R6015 330
R6014 1.8K
X6002
TP6002
C6016 82LH
T6003
C6015 18P CH
R6020 1K
R6018 47
C6014 0.47/50
R6019 820
R6017 47K
T6004
C6013 27P RH
C6025 1/50
C6031 0.01
R6039 6.8K
C6028 0.022
R6029 5.6K
X6005
TP6014
R6030 270
R6040 3.9K
C6024 39P
R6031 330
C6026 1000P
R6032 270K
R6051 10K
R6033 270K
TP6008
C6029 4.7/25
CN6002
5 GND
4 VIDEO OUT
3 GND
2 AUDIO OUT
1 NC
TO VD-1
CN1004
TP6009
C6053 0.01
R6054 2.2K
2.6
(0)
0
(3.7)
(AUDIO MUTE)
0
B6001
2SC3400
VOLTAGE:STOPMODE

## IR REMOTE CO


X1
CSU455 PB
R3
100
8
9
6
20
Q1
BU2
1
2
3
4
19
18
K3
K2
K1
K1
K2
K3
K17
K18

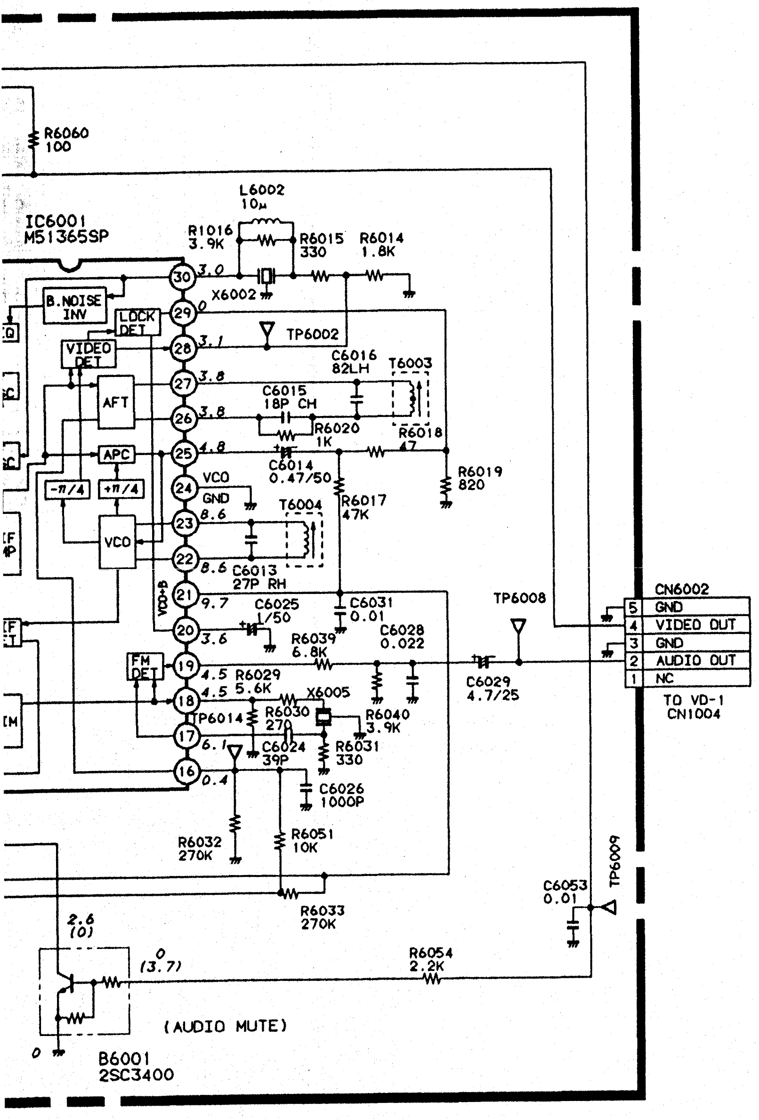
## P.C.B TN-1


R27
X03
R25
C15
C06
R01
R06
R02
R11
LB
MB
AGC

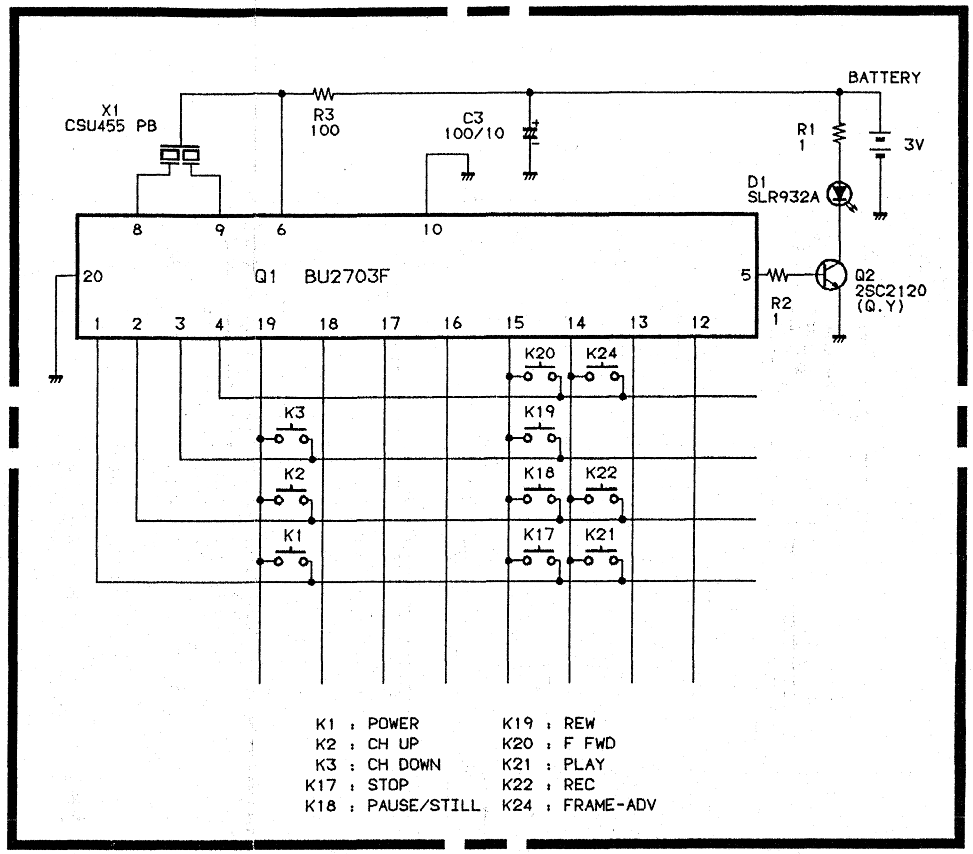
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

2-8

## 3-9-4300-78900)

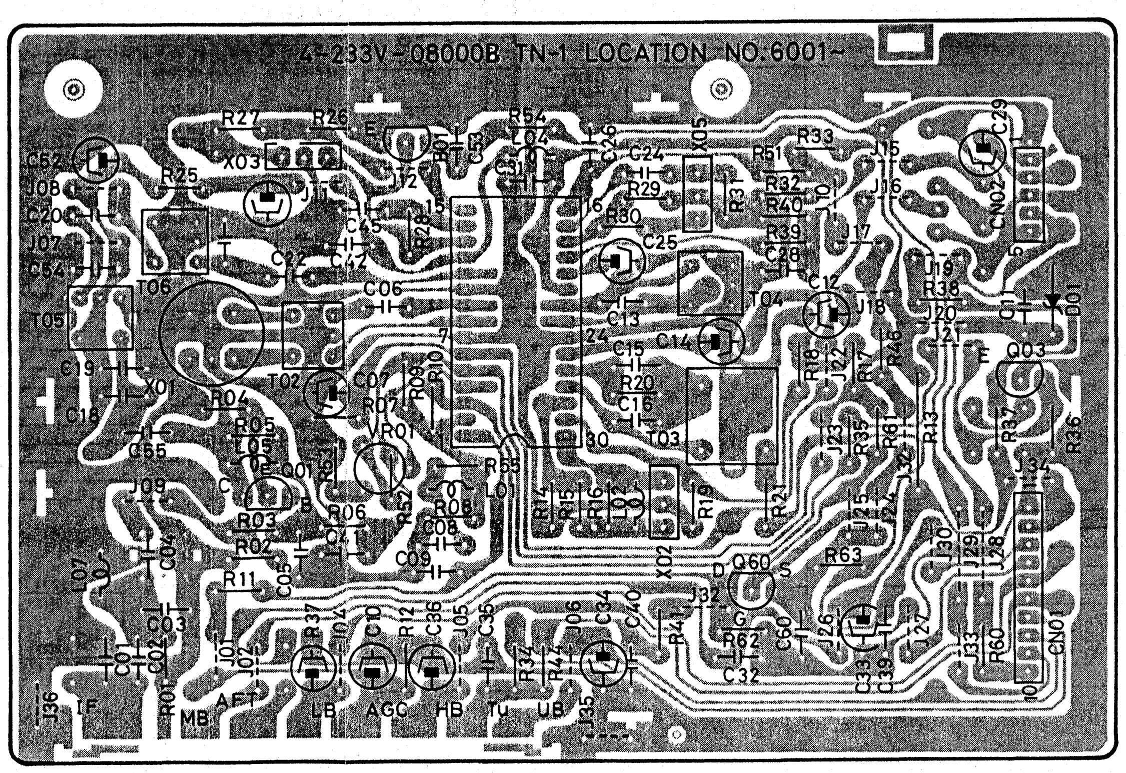

R6060
100
IC6001
M51365SP
L6002
10μ
R1016
3.9K
R6015
330
R6014
1.8K
X6002
B.NOISE INV
LOCK DET
VIDEO DET
TP6002
C6016
82LH
T6003
AFT
C6015
18P CH
R6020
1K
R6018
47
APC
C6014
0.47/50
R6019
820
-π/4
+π/4
VCO
GND
T6004
R6017
47K
VCO
C6013
27P RH
C6031
0.01
VDD-B
C6025
1/50
R6039
6.8K
C6028
0.022
TP6008
CN6002
5 GND
4 VIDEO OUT
3 GND
2 AUDIO OUT
1 NC
TO VD-1
CN1004
FM DET
R6029
5.6K
X6005
C6029
4.7/25
TP6014
R6030
270
R6040
3.9K
C6024
39P
R6031
330
C6026
1000P
R6032
270K
R6051
10K
TP6009
C6053
0.01
R6033
270K
R6054
2.2K
(AUDIO MUTE)
B6001
2SC3400

## IR REMOTE CONTROL CIRCUIT (143-9-4100-64281)


X1
CSU455 PB
R3
100
C3
100/10
BATTERY
R1
1
3V
D1
SLR932A
Q1 BU2703F
Q2
2SC2120
(Q.Y)
R2
1
K1
K2
K3
K17
K18
K19
K20
K21
K22
K24

K1 : POWER
K2 : CH UP
K3 : CH DOWN
K17 : STOP
K18 : PAUSE/STILL
K19 : REW
K20 : F FWD
K21 : PLAY
K22 : REC
K24 : FRAME-ADV

## P.C.B TN-1 TUNER I.F. (143-9-4300-78900)


4-233V-08000B TN-1 LOCATION NO.6001~
IF
MB
AFT
LB
AGC
HB
Tu
UB
CN01
CN02

8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

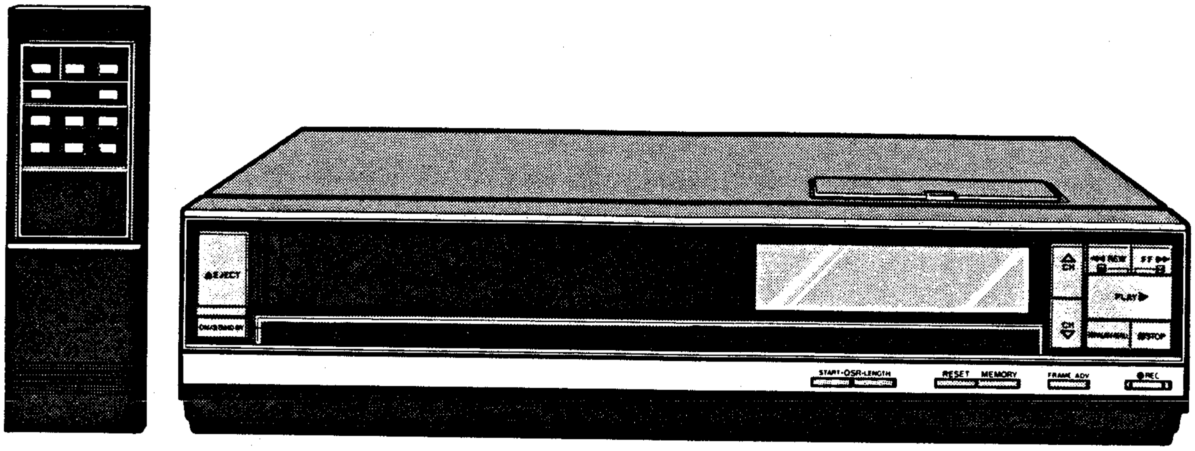
# PARTS LIST & CIRCUIT DIAGRAMS

## COLOUR VIDEO CASSETTE RECORDER

**SANYO**

# VHR-2300G

VHS PAL HQ



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PA2P/G

Reference No. WM-19069

## PRODUCT SAFETY NOTICE

**The components designated by a symbol (⚠) in this schematic diagram designates components whose value are of special significance to product safety. Should any component designated by a symbol need to be replaced, use only the part designated in the Parts List. Do not deviate from the resistance, wattage and voltage ratings shown.**

**NOTE :** Parts order must contain Model Number, Part Number and Description.

### ACCESSORIES

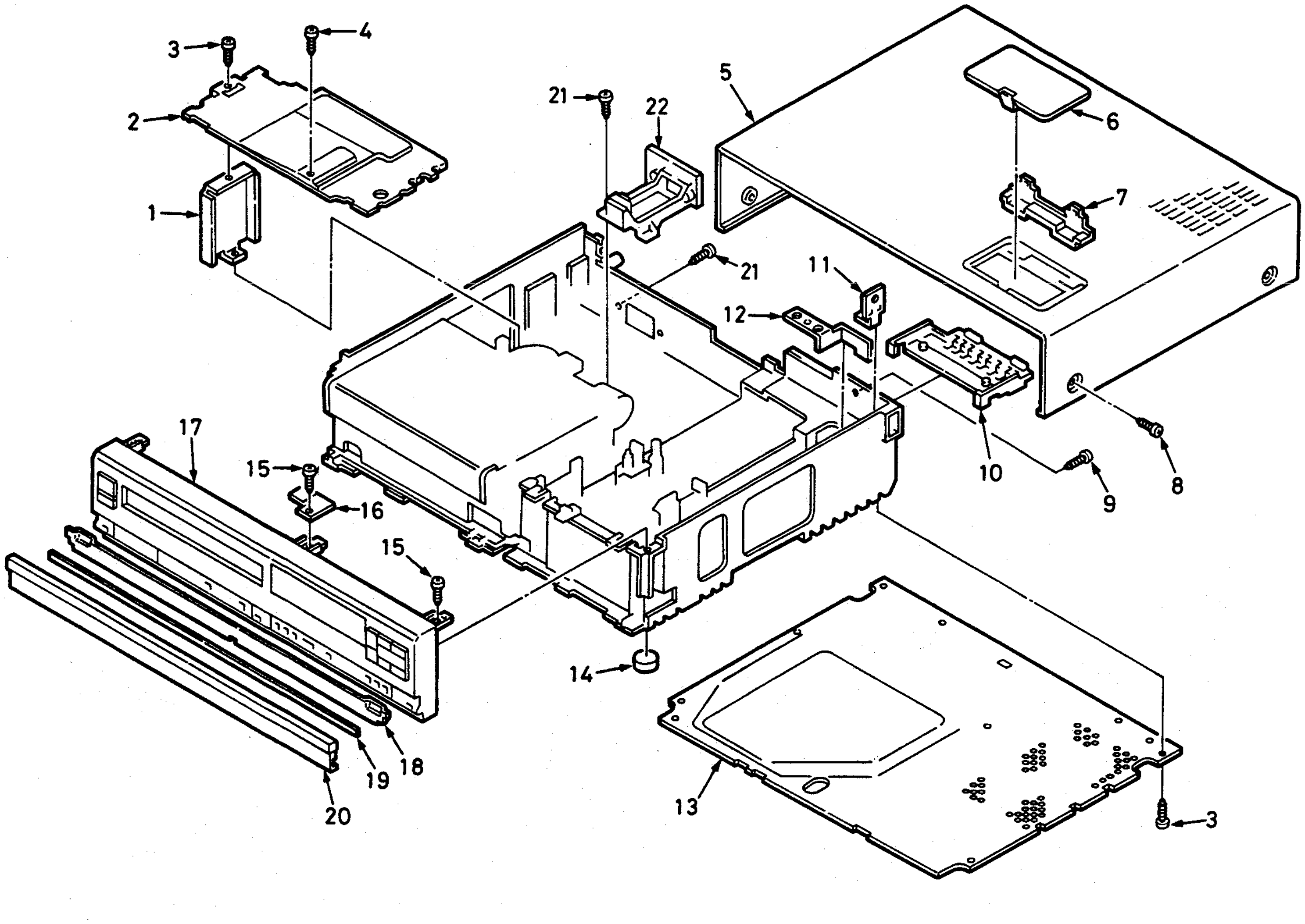
| Ref. No. | Part No. | Description |
|---|---|---|
| | 143–6–411T–81200 | OWNER'S MANUAL |
| | 4–243V–38700 | ANTENNA OUTPUT CABLE |
| | 143–9–4100–64480 | REMOTE CONTROL UNIT |

### PACKING MATERIALS

| Ref. No. | Part No. | Description |
|---|---|---|
| | 143–6–132T–63518 | INNER CARTON |
| | 143–6–251T–04000 | INDIVIDUAL POLY. COVER |
| or | 143–6–251T–08900 | INDIVIDUAL POLY. COVER |
| | 143–6–144T–17000 | PAD, FRONT |
| | 143–6–144T–17200 | PAD, REAR |

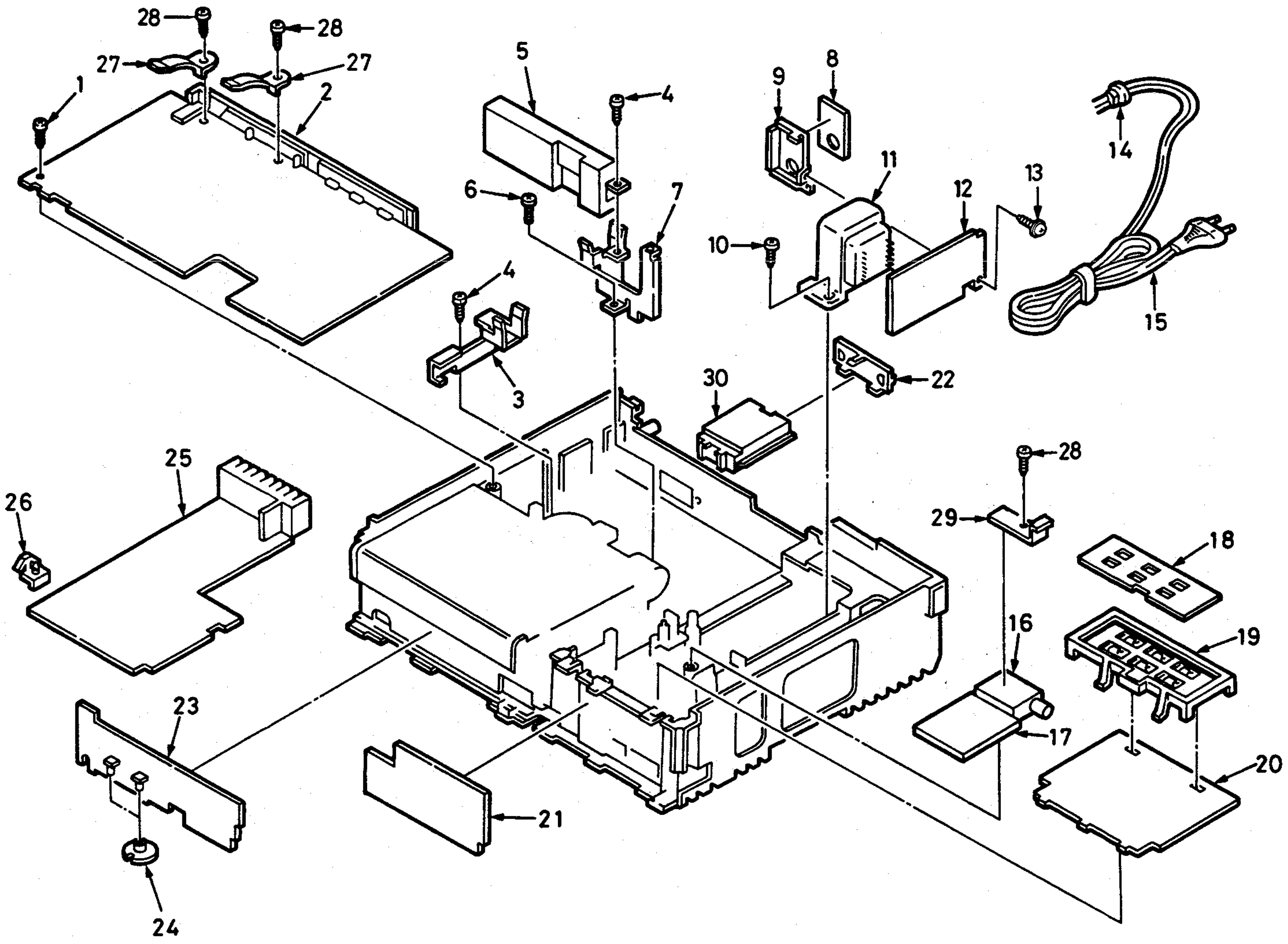
## CABINET PARTS

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143-2-310T-03600 | BRACKET, SHIELD PLATE |
| 2 | 143-2-322T-70701 | UPPER SHIELD PLATE |
| 3 | BJB2S++3+8+Z1 | S T BIND H 3X8Z1 |
| 4 | BJBYS++3+4+Z1 | S M BIND H 3X4Z1 |
| 5 | 143-2-111T-08914 | CABINET |
| 6 | 143-2-133T-16807 | TUNING CONTROL COMPARTMENT COVER |
| 7 | 143-2-210T-04701 | BRACKET, COVER |
| 8 | 143-2-421T-10401 | SCREW, M4X10 |
| 9 | BJB2S++3+8+ZK | S T BIND H 3X8ZK |
| 10 | 143-2-133T-19400 | COVER, HEAT SINK |
| 11 | 143-2-351T-70002 | BRACKET, CHASSIS |
| 12 | 143-2-310T-05200 | BRACKET, CHASSIS |
| 13 | 143-2-125T-07701 | BOTTOM PLATE |
| 14 | 143-2-174T-02402 | STAND |
| 15 | BJB2S++312+Z1 | S T BIND H 3X12Z1 |
| 16 | 143-2-310T-07000 | BRACKET, FRONT PANEL |
| 17 | 143-0-122T-24501 | FRONT PANEL |
| 18 | 143-2-245T-00100 | BACK PLATE, COVER |
| 19 | 141-2-250T-00700 | DOUBLE FACE, COVER |
| 20 | 143-2-133T-22501 | CLOCK/TIMER CONTROL COMPARTMENT COVER |
| 21 | BJB2S++310+ZK | S T BIND H 3X10ZK |
| 22 | 143-0-233V-09800 | TM3 BOARD ASSEMBLY |



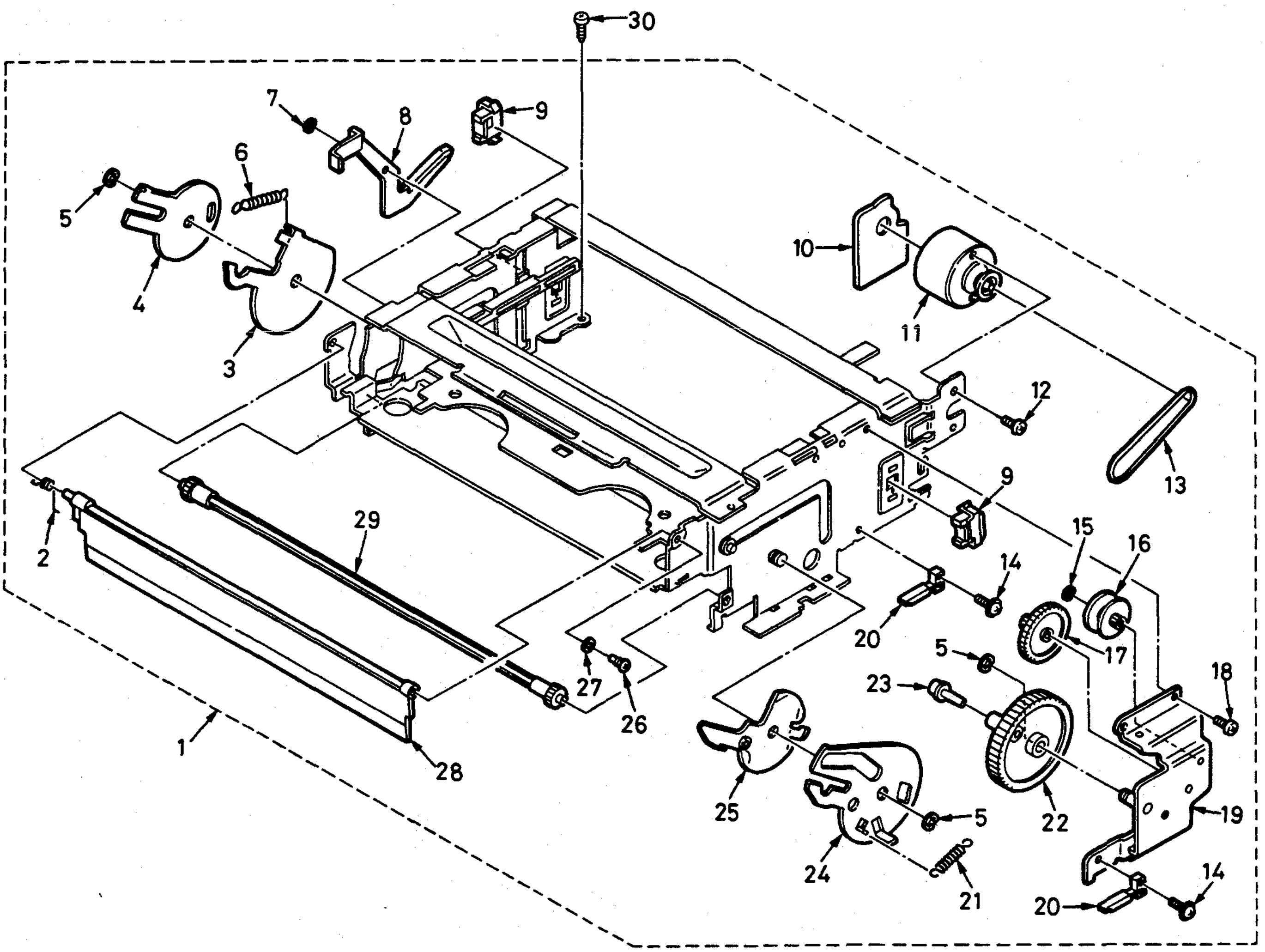
## CHASSIS PARTS

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | BJB2S++312+ZR | S T BIND H 3X12ZR |
| 2 | 143-0-233V-08349 | VD1 BOARD ASSEMBLY |
| 3 | 143-2-351T-73600 | BRACKET, VP-1 PCB. |
| 4 | BJB2S++3+8+Z1 | S T BIND H 3X8Z1 |
| 5 | 143-0-233V-12425 | VP1 BOARD ASSEMBLY |
| 6 | BJBYS++3+4+Z1 | S M BIND H 3X4Z1 |
| 7 | 143-2-351T-75400 | BRACKET, VP-1 PCB. |
| 8 | 143-2-143T-58700 | PLATE, POWER CORD |
| 9 | 143-2-310T-04400 | BRACKET, POWER TRANSFORMER |
| 10 | BJB2S++412+Z1 | S T BIND H 4X12Z1 |
| 11 | ⚠ 4-251V-61110 | POWER TRANSFORMER |
| 12 | 143-0-233V-20950 | PW-1 BOARD ASSEMBLY |
| 13 | BJX6S++3+8+Z1 | S T WASHER H 3X8Z1 |
| 14 | 143-2-464T-02700 | FIXER, POWER CORD |
| 15 | ⚠ 143-0-236V-67530 | POWER CORD |
| 16 | 4-115V-21000 | TUNER |
| 17 | 143-0-233V-08023 | TN-1 BOARD ASSEMBLY |
| 18 | 143-2-143T-67301 | PLATE, TUNING |
| 19 | 143-2-210T-07900 | BRACKET, TUNING |
| 20 | 143-0-233V-17421 | TN2 BOARD ASSEMBLY |
| 21 | 143-0-233V-17521 | TN3 BOARD ASSEMBLY |
| 22 | 143-2-133T-21900 | VPS COMPARTMENT COVER |
| 23 | 143-0-233V-17601 | SY2 BOARD ASSEMBLY |
| 24 | 143-2-163T-06200 | KNOBS, TRACKING & PICTURE |
| 25 | 143-0-233V-05904 | SY1 BOARD ASSEMBLY |
| 26 | 143-2-251T-01400 | HINGE, SY-1 PCB. |
| 27 | 143-2-853T-17700 | SPRING PLATE, VD-1 PCB. |
| 28 | BJB2S++310+Z1 | S T BIND H 3X10Z1 |
| 29 | 143-2-310T-04620 | BRACKET, TN-1 PCB. |
| 30 | 149-0-233V-09700 | TM2 BOARD ASSEMBLY |
| or | 149-0-233V-09701 | TM2 BOARD ASSEMBLY |



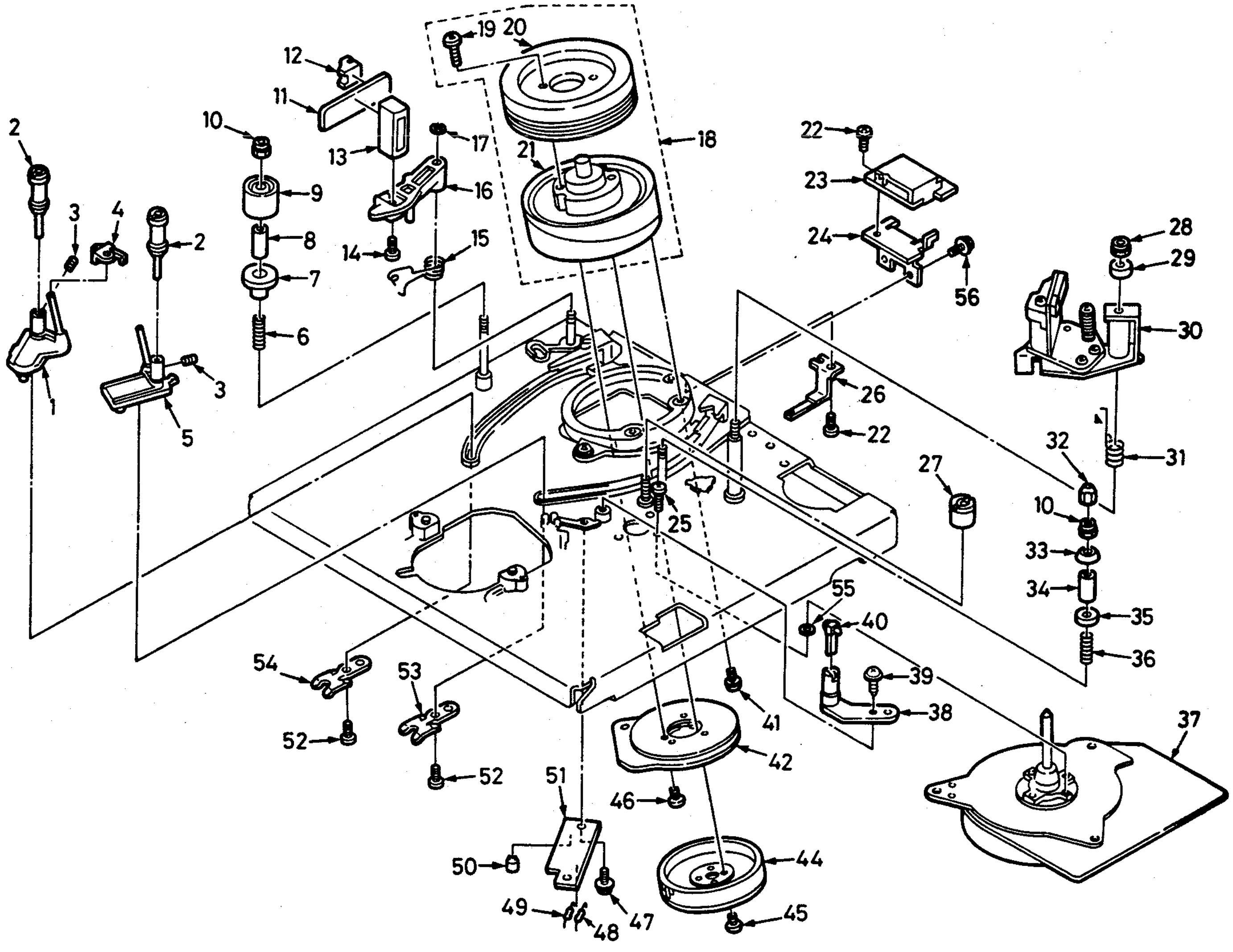
## MECHANISM PARTS(1)

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143-9-351T-75327 | HOLDER ASSEMBLY, CASSETTE |
| 2 | 143-2-851T-81900 | SPRING, DOOR |
| 3 | 143-9-741T-59600 | LEVER, GEAR, LEFT |
| 4 | 143-2-741T-59400 | LEVER, SWING, LEFT |
| 5 | TJETU+++4++++ | E-RING, M4 |
| 6 | 143-2-851T-82600 | SPRING, LEVER, LEFT |
| 7 | TJETU+2R5++++ | E-RING, M2.5 |
| 8 | 143-2-741T-59300 | LEVER, OPENER |
| 9 | 143-0-230V-84950 | MC-31 BOARD ASSEMBLY |
| 10 | 143-0-230V-84651 | MC-32 BOARD ASSEMBLY |
| 11 | 143-0-527V-02600 | MOTOR, FRONT LOADING |
| 12 | BJNBS2R6+3+Z1 | S M PAN H 2.6X3Z1 |
| 13 | 143-2-560T-00900 | BELT, FRONT LOADING MOTOR |
| 14 | BJY1S++2+9+Z1 | S M PAN W/SPR W, WASH 2X9Z1 |
| 15 | TJETU+1R5++++ | E-RING, M1.5 |
| 16 | 143-2-661T-69800 | PULLEY, PINION |
| 17 | 143-2-581T-10900 | GEAR, REDUCTION |
| 18 | BJSTS++3+6+Z1 | S M PAN H 3X6Z1 |
| 19 | 143-0-351T-71600 | BRACKET, FRONT LOADING MOTOR |
| 20 | 4-231V-83500 | SWITCH, START/END |
| 21 | 143-2-851T-82700 | SPRING, LEVER, RIGHT |
| 22 | 143-2-581T-12800 | GEAR, SWING |
| 23 | 143-2-662T-15300 | ROLLER, SWING |
| 24 | 143-2-741T-59700 | LEVER, GEAR, RIGHT |
| 25 | 143-2-741T-59500 | LEVER, SWING, RIGHT |
| 26 | 143-2-421T-11000 | SCREW, CASSETTE DOOR |
| 27 | WJKWS++3R0DZ1 | WASHER, M3X6X0.63 |
| 28 | 143-2-133T-23600 | DOOR, CASSETTE |
| 29 | 143-9-751T-88800 | SHAFT, FRONT LOADING |
| 30 | 143-2-421T-11800 | SCREW, M3X6 |



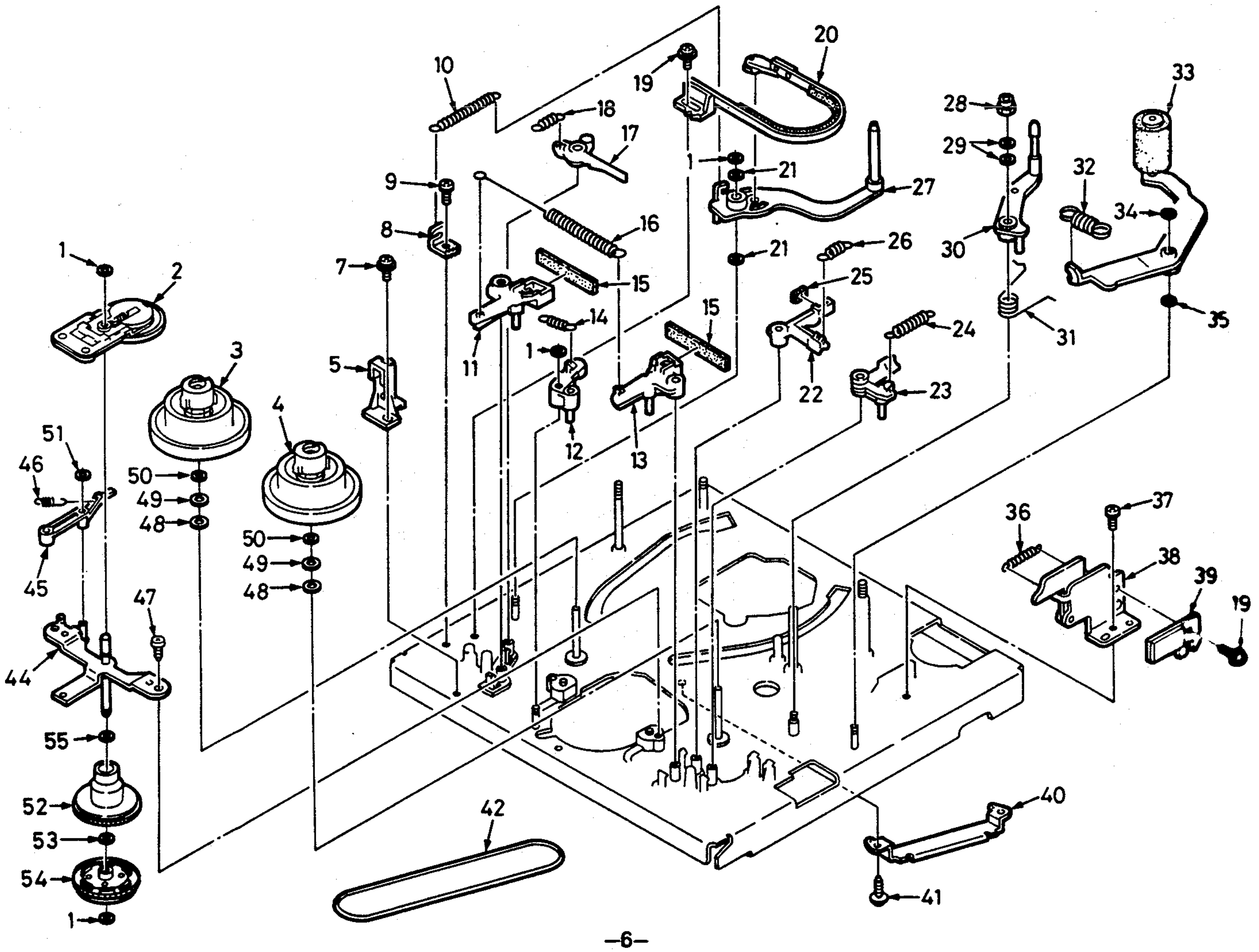
## MECHANISM PARTS(2)

| Location | Part No. | Description |
|---|---|---|
| 1 | 143-0-822T-02901 | GUIDE, LEADING, LEFT |
| 2 | 143-0-821T-13201 | GUIDE, TAPE |
| 3 | BJAMS++2+3MCP | S M H LESS HEX SOCKET 2X3CP |
| 4 | 143-2-351T-73900 | BRACKET, LEFT LEADING GUIDE |
| 5 | 143-0-822T-02801 | GUIDE, LEADING, RIGHT |
| 6 | 143-2-851T-85500 | SPRING, IMPEDANCE ROLLER |
| 7 | 143-2-457T-13400 | WASHER, IMPEDANCE ROLLER |
| 8 | 143-2-681T-17500 | SLEEVE, IMPEDANCE ROLLER |
| 9 | 143-2-662T-15400 | ROLLER, IMPEDANCE |
| 10 | 143-2-421T-12600 | NUT, M3 |
| 11 | 4-230V-99200 | BOARD, MC-23 |
| 12 | 4-235V-46502 | SOCKET, 2PIN, HORIZONTAL, WHITE |
| 13 | 4-242V-24700 | HEAD, ERASE |
| 14 | BJNBS++2+4+Z1 | S M PAN H 2X4Z1 |
| 15 | 143-2-851T-79400 | SPRING, ERASE HEAD LEVER |
| 16 | 143-2-741T-57501 | LEVER, ERASE HEAD |
| 17 | TJETU+++3++++ | E-RING, M3 |
| 18 | 143-0-771T-09400 | DRUM ASSEMBLY |
| 19 | BJX1S++3+8+Z1 | S M PAN W/FLANGE WAS 3X8Z1 |
| 20 | 143-0-771T-09500 | DRUM, UPPER |
| 21 | 143-0-771T-09600 | DRUM, LOWER |
| 22 | BJX2S++3+4+Z1 | S M PAN W/SPRING WAS 3X4Z1 |
| 23 | 143-0-233V-20250 | MC-30 BOARD ASSEMBLY |
| 24 | 143-2-377T-21400 | BRACKET, MC-30 BOARD |
| 25 | BJX2S++3+6+Z1 | S M PAN W/SPRING WAS 3X6Z1 |
| 26 | 143-0-324T-00923 | PLATE, GROUNDING |
| 27 | 143-2-421T-10200 | NUT, M4 |
| 28 | 143-2-421T-12400 | NUT, M5 |
| 29 | 143-2-352T-22800 | SPACER, AUDIO/CONTROL HEAD |
| 30 | 143-9-242V-24622 | HEAD ASSEMBLY, AUDIO/CONTROL |
| 31 | 143-2-851T-85100 | SPRING, AUDIO/CONTROL HEAD |
| 32 | 143-2-421T-13100 | NUT |
| 33 | 143-2-457T-15500 | WASHER, M3X7.8X0.8 |
| 34 | 143-2-821T-13100 | GUIDE, TAPE |
| 35 | 143-2-457T-07800 | WASHER, M3X8X2.3 |
| 36 | 143-2-851T-86100 | SPRING, TAPE GUIDE |
| 37 | 4-527V-54102 | MOTOR, CAPSTAN |
| 38 | 143-0-210T-04400 | BRACKET, TAPE END SENSOR |
| 39 | BJXWS2R6+8+Z1 | S T WASHER H 2.6X8Z1 |
| 40 | SLLN59+++++NO | TAPE END SENSOR, LN59 |
| 41 | BJX2S++3+5+Z1 | S M PAN W/SPRING WAS 3X5Z1 |
| 42 | 4-264V-17500 | STATOR, DRUM |
| 44 | 143-2-774T-03000 | ROTOR, DRUM |
| 45 | 143-2-421T-13000 | SCREW, M2.3X4 |
| 46 | BJX2S2R310+Z1 | S M PAN W/SPRING WAS 2.3X10Z1 |
| 47 | BJXWS2R6+6+Z1 | S T WASHER H 2.6X6Z1 |
| 48 | 401 026 0647 | CARBON 270 JA 1/6W |
| 49 | 401 024 6740 | CARBON 100 JA 1/6W |
| 50 | 4-202V-15200 | SENSOR, REEL |
| 51 | 4-233V-07600 | BOARD, REEL SENSOR |
| 52 | BJBYS++2+4+Z1 | S M BIND H 2X4Z1 |
| 53 | 143-2-822T-02700 | BRACKET, RIGHT LEADING GUIDE |
| 54 | 143-2-822T-02600 | BRACKET, LEFT LEADING GUIDE |
| 55 | 143-2-457T-15001 | WASHER, M3.4X8X0.2 |
| 56 | BJX2S2R6+6+Z1 | S M PAN W/SPRING WAS 2.6X6Z1 |



## MECHANISM PARTS(3)

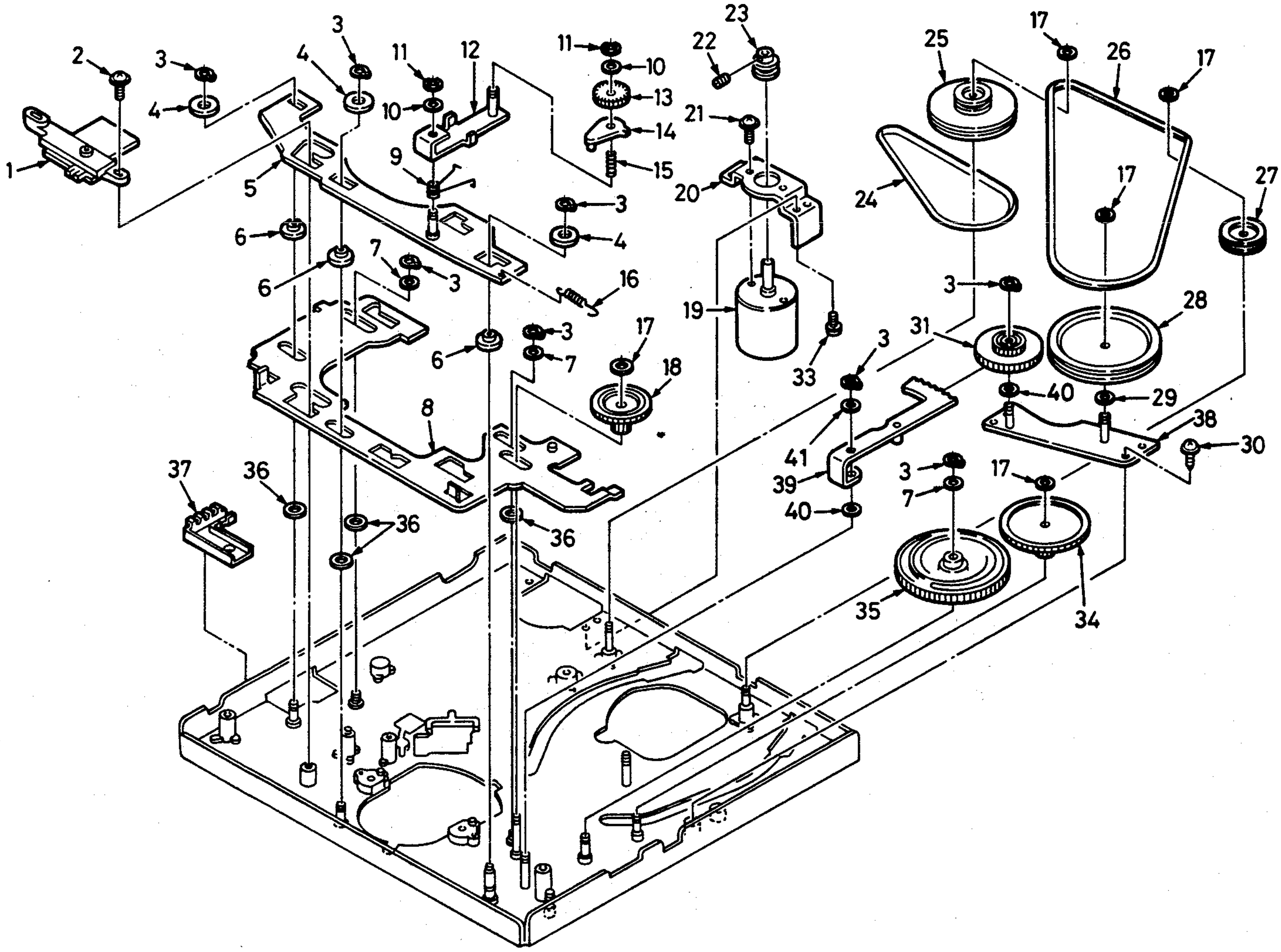
| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143-2-457T-12200 | WASHER, M2.4X6X0.4 |
| 2 | 143-0-662T-15620 | ROLLER, REEL DRIVE |
| 3 | 143-0-531T-05100 | REEL PLATE, SUPPLY |
| 4 | 143-0-531T-05121 | REEL PLATE, TAKE-UP |
| 5 | 4-231V-86301 | SWITCH, ERASE PREVENTION |
| 7 | BJY1S2R6+6+Z1 | S M PAN W/SPR W, WASH 2.6X6Z1 |
| 8 | 143-2-858T-03600 | BRACKET, BACK TENSION SPRING |
| 9 | BJX2S++3+5+Z1 | S M PAN W/SPRING WAS 3X5Z1 |
| or | BJX2S++3+8+Z1 | S M PAN W/SPRING WAS 3X8Z1 |
| 10 | 143-2-851T-85900 | SPRING, BACK TENSION |
| 11 | 143-0-741T-57000 | LEVER, SUPPLY REEL BRAKE |
| 12 | 143-0-741T-57900 | LEVER, IDLER STOPPER |
| 13 | 143-0-741T-56900 | LEVER, TAKE-UP REEL BRAKE |
| 14 | 143-2-851T-84600 | SPRING, IDLER STOPPER |
| 15 | 143-2-712T-04300 | BRAKE SHOE |
| 16 | 143-2-851T-79700 | SPRING, REEL BRAKE |
| 17 | 143-0-741T-57300 | LEVER, SUPPLY SOFT BRAKE |
| 18 | 143-2-851T-84900 | SPRING, SUPPLY SOFT BRAKE |
| 19 | BJY1S++3+6+Z1 | S M PAN W/SPR W, WASH 3X6Z1 |
| 20 | 143-0-711T-02021 | BAND, BRAKE |
| 21 | 141-2-453T-30302 | WASHER, M3X5.4X0.5 |
| 22 | 143-2-741T-57100 | LEVER, TAKE-UP SOFT BRAKE |
| 23 | 143-0-741T-57200 | LEVER, REWIND SOFT BRAKE |
| 24 | 143-2-851T-79200 | SPRING, TAKE-UP SOFT BRAKE |
| 25 | 143-2-712T-04400 | BRAKE SHOE |
| 26 | 143-2-851T-79100 | SPRING, TAKE-UP SOFT BRAKE |
| 27 | 143-0-741T-61100 | LEVER, BACK TENSION |
| 28 | 143-2-421T-12600 | NUT, M3 |
| 29 | 143-2-453T-00401 | WASHER, M3.1X6X0.25 |
| 30 | 143-0-741T-56800 | LEVER, REWIND GUIDE |
| 31 | 143-2-851T-78100 | SPRING, REWIND GUIDE LEVER |
| 32 | 143-2-851T-80100 | SPRING, PINCH ROLLER |
| 33 | 143-0-545T-02720 | ROLLER, PINCH |
| 34 | TJETU+++3++++ | E-RING, M3 |
| 35 | 141-2-453T-30502 | WASHER, M4.1X6.5X0.5 |
| 36 | 143-2-851T-80200 | SPRING, CASSETTE OPENER |
| 37 | BJX2S2R6+4+Z1 | S M PAN W/SPRING WAS 2.6X4Z1 |
| 38 | 143-0-741T-58300 | LEVER, CASSETTE OPENER |
| 39 | 4-221V-18110 | SENSOR, DEW |
| 40 | 143-2-351T-75000 | BRACKET, CAPSTAN MOTOR |
| 41 | BJXWS++310+Z1 | S T WASHER H 3X10Z1 |
| 42 | 143-2-560T-01000 | BELT, REEL DRIVE |
| 44 | 143-0-351T-73110 | BRACKET, ROLLER |
| 45 | 143-2-741T-61000 | LEVER, SUPPLY SOFT BRAKE |
| 46 | 143-2-851T-83800 | SPRING, SUPPLY SOFT BRAKE LEVER |
| 47 | BJB2S2R6+8+Z1 | S T BIND H 2.6X8Z1 |
| 48 | 143-2-453T-00400 | WASHER, M3.1X6X0.5 |
| 49 | 143-2-352T-21100 | SPACER, REEL PLATES |
| 50 | 143-2-453T-00400 | WASHER, M3.1X6X0.5 |
| or | 143-2-453T-00401 | WASHER, M3.1X6X0.25 |
| or | 143-2-453T-00402 | WASHER, M3.1X6X0.13 |
| or | 143-2-453T-00403 | WASHER, M3.1X6X0.2 |
| or | 143-2-453T-00404 | WASHER, M3.1X6X0.4 |
| 51 | 143-2-457T-12000 | WASHER |
| 52 | 143-0-581T-13423 | GEAR, SLIP, UPPER |
| 53 | 143-2-457T-16100 | WASHER |
| 54 | 143-0-581T-13200 | GEAR, SLIP, LOWER |
| 55 | 143-2-457T-16400 | WASHER, M3.1X5.4X0.4 |



## MECHANISM PARTS(4)

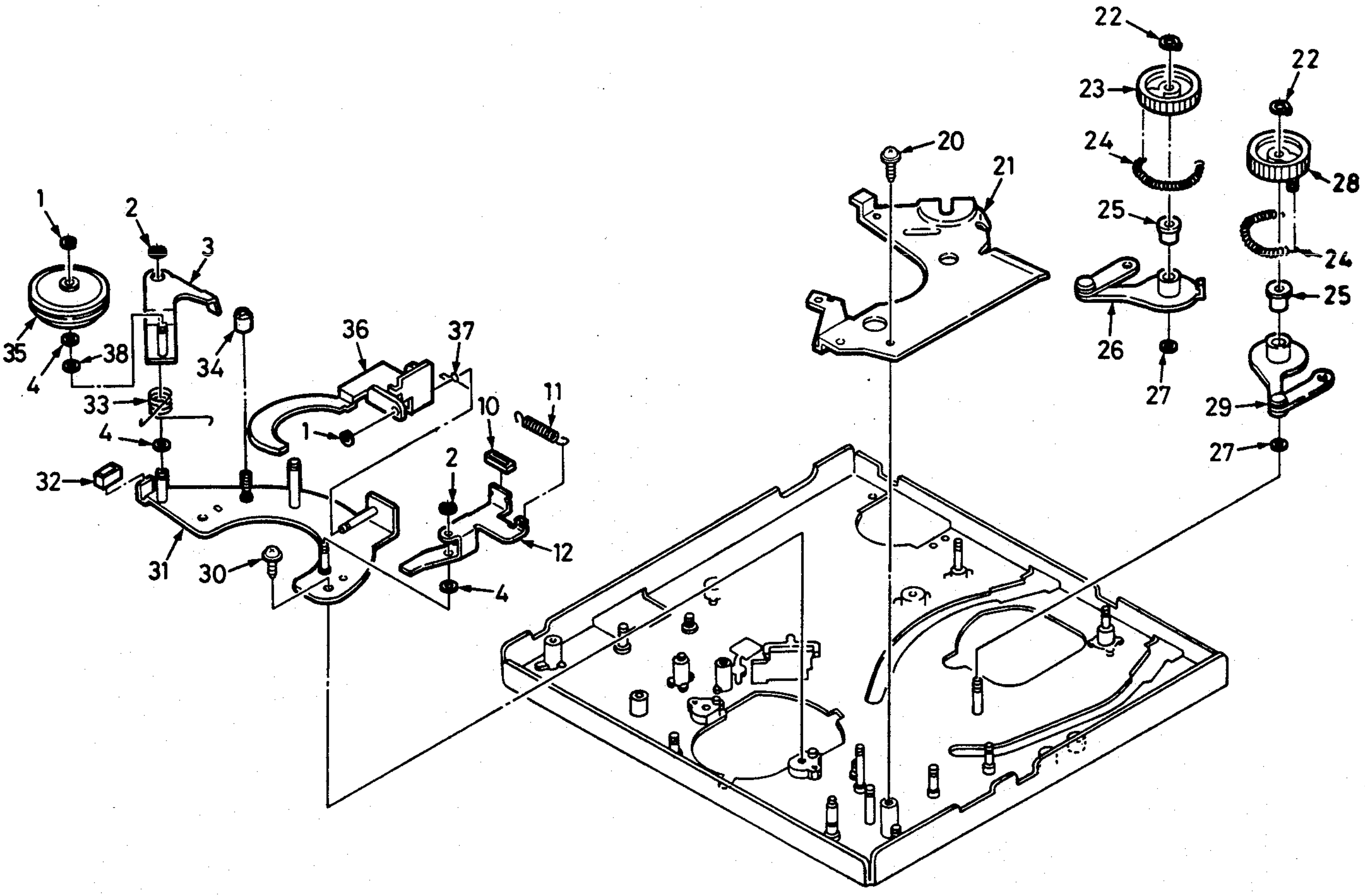
| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 4-231V-86500 | SWITCH, MODE SELECT |
| 2 | 143-2-421T-12700 | SCREW, M2.6X12 |
| 3 | TJGTS+++3++CP | G-RING, M3 |
| 4 | 143-2-457T-12600 | WASHER, M4.2X12X0.5 |
| 5 | 143-0-731T-15300 | SLIDE, UPPER |
| 6 | 143-2-681T-17400 | SLEEVE, SLIDE |
| 7 | 143-2-457T-13600 | WASHER, M4.2X7.8X0.25 |
| 8 | 143-0-731T-15200 | SLIDE, LOWER |
| 9 | 143-2-851T-83200 | SPRING, INSTANT BRAKE LEVER |
| 10 | 143-2-457T-13500 | WASHER, M3.2X7X0.25 |
| 11 | EJETU+2R3++++ | E-RING, M2.3 |
| 12 | 143-0-741T-57700 | LEVER, INSTANT BRAKE |
| 13 | 143-0-581T-11800 | GEAR, SLIP |
| 14 | 143-2-741T-57800 | LEVER, SLIP GEAR |
| 15 | 143-2-851T-78300 | SPRING, SLIP GEAR |
| 16 | 143-2-851T-78400 | SPRING, SLIDE RETURN |
| 17 | 143-2-457T-12200 | WASHER, M2.4X6X0.4 |
| 18 | 143-2-581T-11900 | GEAR, CENTER, INSTANT BRAKE |
| 19 | 4-527V-02700 | MOTOR, LOADING |
| or | 143-0-527V-02800 | MOTOR, LOADING |
| or | 143-0-527V-02722 | MOTOR, LOADING |
| 20 | 143-2-378T-02800 | BRACKET, LOADING MOTOR |
| 21 | BJY3S2R62R8Z1 | S M WASHER H 2.6X2.8Z1 |

| Ref. No. | Part No. | Description |
|---|---|---|
| 22 | BJAMS2R6+2DCP | S M H LESS<br>HEX SOCKET 2.6X2.6CP |
| 23 | 143-2-661T-72000 | PULLEY, LOADING MOTOR |
| 24 | 143-2-564T-04200 | BELT, SMALL |
| 25 | 143-2-661T-71800 | PULLEY, TWO STEPS |
| 26 | 143-2-564T-04300 | BELT, LARGE |
| 27 | 143-2-661T-71700 | PULLEY, SMALL |
| 28 | 143-2-661T-71900 | PULLEY, LARGE |
| 29 | 141-2-453T-30301 | WASHER, M3X5.4X0.25 |
| 30 | BJXWS2R6+8+Z1 | S T WASHER H 2.6X8Z1 |
| 31 | 143-2-581T-11600 | GEAR, TWO STEPS |
| 33 | BJY3S2R6+8+Z1 | S M WASHER H 2.6X8Z1 |
| 34 | 143-2-581T-11500 | GEAR, TWO STEPS |
| 35 | 143-2-671T-02500 | CAM, DRIVE |
| 36 | 141-2-453T-30501 | WASHER, M4.1X6.5X0.25 |
| 37 | 143-2-351T-75100 | BRACKET, MODE SELECT SWITCH |
| 38 | 143-0-351T-68621 | BRACKET, PULLEY SUPPORT |
| 39 | 143-0-581T-11701 | GEAR, LEVER |
| 40 | 141-2-453T-31701 | WASHER, M4X8X0.5 |
| 41 | 143-2-453T-00403 | WASHER, M3.1X6X0.2 |



## MECHANISM PARTS(5)

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143-2-457T-12200 | WASHER, M2.4X6X0.4 |
| 2 | TJETU+2R3++++ | E-RING, M2.3 |
| 3 | 143-0-741T-60700 | LEVER, REWIND GEAR |
| 4 | 141-2-453T-30302 | WASHER, M3X5.4X0.5 |
| 10 | 143-2-445T-16000 | CUSHION, LEVER |
| 11 | 143-2-851T-83600 | SPRING, LEVER PRESSURE |
| 12 | 143-2-741T-60900 | LEVER, FF SELECT, RIGHT |
| 20 | BJXWS2R6+8+Z1 | S T WASHER H 2.6X8Z1 |
| 21 | 143-0-465T-12401 | STOPPER, INSTANT BRAKE LEVER |
| 22 | TJGTS+++3++CP | G-RING, M3 |
| 23 | 143-0-581T-11300 | GEAR, PRESSURE LEVER, RIGHT |
| 24 | 143-2-851T-78200 | SPRING, PRESSURE LEVER |
| 25 | 143-2-681T-16800 | SLEEVE, PRESSURE LEVER |
| 26 | 143-0-741T-58101 | LEVER, PRESSURE, RIGHT |
| 27 | 143-2-457T-13600 | WASHER, M4.2X7.8X0.25 |
| 28 | 143-0-581T-11400 | GEAR, PRESSURE LEVER, LEFT |
| 29 | 143-0-741T-58001 | LEVER, PRESSURE, LEFT |
| 30 | BJXWS++3108+Z1 | S T WASHER H 3X10Z1 |
| 31 | 143-0-351T-73000 | BRACKET, GEAR |
| 32 | 143-2-445T-15900 | CUSHION, BRACKET |
| 33 | 143-2-851T-83700 | SPRING, REWIND GEAR PRESSURE |
| 34 | 143-2-421T-11600 | NUT, M3 |
| 35 | 143-0-581T-13321 | GEAR, REWIND |
| 36 | 143-0-747T-06322 | BRACKET, GEAR LOCK |
| 37 | 143-2-851T-86700 | SPRING |
| 38 | 141-2-453T-30300 | WASHER, M3X5.4X0.13 |



# ELECTRICAL PARTS

**NOTE:**

* Materials of Capacitors are abbreviated as follows;

| | |
|---|---|
| ALUMINUM | Aluminum Electrolytic Capacitor |
| BC CON | Barrier Layer Ceramic Capacitor |
| CERAMIC | Ceramic Capacitor |
| EDL | Electric Double Layer Capacitor |
| ELECT | Electrolytic Capacitor |
| MYLAR | Mylar Film Capacitor |
| NON POLARIZED | Non Polarized Electrolytic Capacitor |
| POLYPRO | Polypropylene Capacitor |

* Tolerance of Capacitor, Resistors and Other parts are noted with follow symboles;

| | | | |
|---|---|---|---|
| A | +75-10% | M | ±20% |
| F | ±1% | N | ±30% |
| G | ±2% | P | +100-0% |
| J | ±5% | Z | +80-20% |
| K | ±10% | | |

## VD-1 BOARD (VIDEO)
## NO.143-0-233V-08349

| Location | Part No. | Description |
|---|---|---|
| | 143-0-233V-08400 | VD2 BOARD ASSEMBLY |
| | 143-2-143T-64271 | PLATE, JACKS & SWITCHES |
| | 143-9-4300-74200 | RF CONVERTER |
| | 143-0-233V-21122 | VD-5 BOARD ASSEMBLY |
| | 143-2-210T-08500 | BRACKET, VD-5 PCB. |
| | 143-0-208V-02600 | HIC BOARD ASSEMBLY |
| | | **(COMPOSITE)** |
| B1001 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B1002 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B1080 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B1301 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B1302 | SRA1345++++++ | TR MD 2SA1345 |
| or | SRRN2204+++++ | TR MD RN2204 |
| B1303 | SRA1348+++++T | TR MD 2SA1348 |
| or | SRRN2202++++T | TR MD RN2202 |
| B1304 | SRA1345+++++T | TR MD 2SA1345 |
| or | SRRN2204++++T | TR MD RN2204 |
| | | **(CAPACITORS)** |
| C1001 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1002 | CE+16107MRAKL | ELECT 100MF 16V M R AK |
| C1003 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1004 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1005 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1006 | CC+505R6KASLG | CERAMIC 5.6PF 50V K A SL |
| C1007 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1008 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1009 | CC+50181JAYBG | CERAMIC 180PF 50V J A YB |
| C1010 | CC+50820JAYBG | CERAMIC 82PF 50V J A YB G |
| C1011 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1012 | CC+50151JRSLL | CERAMIC 150PF 50V J R SL |
| C1013 | CE6R3476MRAKL | ELECT 47MF 6.3V M R AK |
| C1014 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1015 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1016 | CC+50390JASLG | CERAMIC 39PF 50V J A SL G |
| C1017 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1018 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1019 | CC+50120JASLG | CERAMIC 12PF 50V J A SL G |
| C1020 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1021 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1022 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1023 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1024 | CB+25223MRXRL | BC CON 0.022MF 25V M R XR |
| C1025 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C1026 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C1027 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1028 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1029 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C1030 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C1031 | CC+50561KAYBG | CERAMIC 560PF 50V K A YB |
| C1032 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1033 | CC+50151KAYBG | CERAMIC 150PF 50V K A YB |
| C1034 | CC+50221JRSLL | CERAMIC 220PF 50V J R SL |
| C1035 | CC+50680JASLG | CERAMIC 68PF 50V J A SL G |
| C1036 | CC+50471JRSLL | CERAMIC 470PF 50V J R SL |
| C1037 | CC+50471JRSLL | CERAMIC 470PF 50V J R SL |
| C1038 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1039 | CE+16106MRAKL | ELECT 10MF 16V M R AK |
| C1040 | CC+50471JRSLL | CERAMIC 470PF 50V J R SL |
| C1041 | CC+50471JAYBG | CERAMIC 470PF 50V J A YB |
| C1042 | CC+50271JAYBG | CERAMIC 270PF 50V J A YB |
| C1043 | CE+50104MRAKL | ELECT 0.1MF 50V M R AK |
| C1044 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1045 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1046 | CC+50820JAYBG | CERAMIC 82PF 50V J A YB G |
| C1047 | CC+50391JAYBG | CERAMIC 390PF 50V J A YB |
| C1049 | CB+25473MDXRS | BC CON 0.047MF 25V M D XR |
| C1050 | CC+50390JRCHL | CERAMIC 39PF 50V J R CH |
| C1051 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1052 | CE+50105MRAKL | ELECT 1MF 50V M R AK |
| C1053 | CC+50680JASLG | CERAMIC 68PF 50V J A SL G |
| C1054 | CC+50331KAYBG | CERAMIC 330PF 50V K A YB |
| C1055 | CE+25335MRAKL | ELECT 3.3MF 25V M R AK |
| C1056 | CE+50225MRAKL | ELECT 2.2MF 50V M R AK |
| C1057 | CE+25475MRAKL | ELECT 4.7MF 25V M R AK |
| C1058 | CE+50225MRHAL | ELECT 2.2MF 50V M R HA |
| C1059 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1060 | CC+50471KAYBG | CERAMIC 470PF 50V K A YB |
| C1083 | CC+50330JASLG | CERAMIC 33PF 50V J A SL G |
| C1084 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1101 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1106 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C1107 | CC+50102JAYBG | CERAMIC 0.001MF 50V J AYB |
| C1108 | CC+505R6DACHG | CERAMIC 5.6PF 50V D A CH |
| C1110 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1111 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1112 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C1113 | CE+50225MRHAL | ELECT 2.2MF 50V M R HA |
| C1114 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C1115 | CC+50270JASLG | CERAMIC 27PF 50V J A SL G |
| C1116 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1117 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1119 | CB+25223MRXRL | BC CON 0.022MF 25V M R XR |
| C1120 | CE+10226MRHAL | ELECT 22MF 10V M R HA |
| C1122 | CC+50471JAYBG | CERAMIC 470PF 50V J A YB |
| C1124 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1125 | CE+50104MRHAL | ELECT 0.1MF 50V M R HA |
| C1126 | CM+50223KG++S | MYLAR 0.022MF 50V K G |
| C1127 | CB+16104MRXRL | BC CON 0.1MF 16V M R XR |
| C1301 | CE6R3477MRHAL | ELECT 470MF 6.3V M R HA |
| C1302 | CE+16476MVHAS | ELECT 47MF 16V M V HA |
| C1303 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |

| Location | Part No. | Description |
|---|---|---|
| C1304 | CE6R3477MRHAL | ELECT 470MF 6.3V M R HA |
| C1305 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1306 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C1307 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1308 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1309 | CE+16476MRHAL | ELECT 47MF 16V M R HA |
| C1310 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1311 | CE+10226MRHAL | ELECT 22MF 10V M R HA |
| C1312 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C1313 | CC+50151JRSLL | CERAMIC 150PF 50V J R SL |
| C1314 | CC+50680JASLG | CERAMIC 68PF 50V J A SL G |
| C1322 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C1323 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C1325 | CB+16104MRXRL | BC CON 0.1MF 16V M R XR |
| C1340 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
|  |  | **(DIODES)** |
| D1002 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1003 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1101 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1104 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1301 | SD1S2473++++T | DIODE 1S2473 |
| D1302 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1305 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D1340 | SD1SS133++++T | DIODE 1SS133 |
|  |  | **(INTEGRATED CIRCUITS)** |
| IC1001 | SIAN3320K++++ | IC AN3320K |
| IC1002 | SIAN3215K++++ | IC AN3215K |
|  |  | **(COILS)** |
| L1001 | 4–253V–97125 | HF CHOKE 100UH |
| L1002 | 4–253V–97015 | HF CHOKE 150UH |
| L1003 | 4–253V–97012 | HF CHOKE 82UH |
| L1004 | 4–253V–97125 | HF CHOKE 100UH |
| L1005 | 4–253V–97111 | HF CHOKE 6.8UH |
| L1006 | 4–253V–97003 | HF CHOKE 15UH |
| L1007 | 4–253V–97003 | HF CHOKE 15UH |
| L1008 | 4–253V–97014 | HF CHOKE 120UH |
| L1009 | 4–253V–97125 | HF CHOKE 100UH |
| L1104 | 4–253V–97009 | HF CHOKE 47UH |
| L1105 | 4–253V–97125 | HF CHOKE 100UH |
| L1106 | 4–253V–97006 | HF CHOKE 27UH |
| L1107 | 4–253V–97005 | HF CHOKE 22UH |
| L1109 | 4–253V–97003 | HF CHOKE 15UH |
| L1301 | 4–253V–97125 | HF CHOKE 100UH |
| L1303 | 4–253V–97125 | HF CHOKE 100UH |
| L1304 | 4–253V–97003 | HF CHOKE 15UH |
|  |  | **(TRANSISTORS)** |
| Q1001 | STA608+F++++B | TR 2SA608 F |
| Q1002 | STC536+F++++B | TR 2SC536 F |
| Q1003 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1004 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1005 | STC536+E++++1 | TR 2SC536 E SP |
| or | STC536+F++++1 | TR 2SC536 F SP |
| or | STC1740Q++++1 | TR 2SC1740S Q SP |
| or | STC1740R++++1 | TR 2SC1740S R SP |
| Q1080 | STA608+E++++B | TR 2SA608 E |
| or | STA608+F++++B | TR 2SA608 F |
| or | STA1309Q++++T | TR 2SA1309 Q |
| or | STA1309R++++T | TR 2SA1309 R |
| Q1081 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1082 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1083 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1101 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1102 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1103 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1105 | STA608+E++++B | TR 2SA608 E |
| or | STA608+F++++B | TR 2SA608 F |
| or | STA1309Q++++T | TR 2SA1309 Q |
| or | STA1309R++++T | TR 2SA1309 R |
| Q1301 | STA608+E++++B | TR 2SA608 E |
| or | STA608+F++++B | TR 2SA608 F |
| or | STA1309Q++++T | TR 2SA1309 Q |
| or | STA1309R++++T | TR 2SA1309 R |
| Q1302 | STA608+E++++B | TR 2SA608 E |
| or | STA608+F++++B | TR 2SA608 F |
| or | STA1309Q++++T | TR 2SA1309 Q |
| or | STA1309R++++T | TR 2SA1309 R |
| Q1303 | STC536+E++++B | TR 2SC536 E |
| or | STC536+F++++B | TR 2SC536 F |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| Q1304 | STA984+E++++T | TR 2SA984 E |
| or | STA984+F++++T | TR 2SA984 F |
| or | STA562+Y++++T | TR 2SA562 Y |
| Q1306 | STC536+E++++1 | TR 2SC536 E SP |
| or | STC536+F++++1 | TR 2SC536 F SP |
| or | STC1740Q++++1 | TR 2SC1740S Q SP |
| or | STC1740R++++1 | TR 2SC1740S R SP |
| Q1307 | STA984+E++++T | TR 2SA984 E |
| or | STA984+F++++T | TR 2SA984 F |
| or | STA562+Y++++T | TR 2SA562 Y |
| Q1308 | STC536+E++++1 | TR 2SC536 E SP |
| or | STC536+F++++1 | TR 2SC536 F SP |
| or | STC1740Q++++1 | TR 2SC1740S Q SP |
| or | STC1740R++++1 | TR 2SC1740S R SP |
| Q1340 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| or | STC2669O++++T | TR 2SC2669 O |
| or | STC2669Y++++T | TR 2SC2669 Y |
|  |  | **(RESISTORS)** |
| R1001 | 401 026 6401 | CARBON 39 JA 1/6W |
| R1002 | 401 025 4200 | CARBON 1.8K JA 1/6W |
| R1003 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R1004 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R1005 | 401 026 6401 | CARBON 39 JA 1/6W |
| R1006 | 401 025 4200 | CARBON 1.8K JA 1/6W |
| R1007 | 401 026 8108 | CARBON 4.7 JA 1/6W |
| R1008 | 401 025 4606 | CARBON 18K JA 1/6W |
| R1009 | 401 027 5205 | CARBON 680 JA 1/6W |
| R1010 | 401 026 4308 | CARBON 3.3K JA 1/6W |
| R1011 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1012 | 401 024 6700 | CARBON 100 JA 1/6W |
| R1013 | 401 024 7400 | CARBON 10K JA 1/6W |

X

| Location | Part No. | Description |
|---|---|---|
| R1014 | 401 025 0608 | CARBON 1.3K JA 1/6W |
| R1015 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1016 | 401 026 0607 | CARBON 270 JA 1/6W |
| R1017 | 401 026 2700 | CARBON 300 JA 1/6W |
| R1018 | 401 025 7409 | CARBON 220 JA 1/6W |
| R1019 | 401 027 2303 | CARBON 560 JA 1/6W |
| R1020 | 401 027 5205 | CARBON 680 JA 1/6W |
| R1021 | 401 027 2303 | CARBON 560 JA 1/6W |
| R1022 | 401 027 6905 | CARBON 750 JA 1/6W |
| R1023 | 401 025 1605 | CARBON 1.5K JA 1/6W |
| R1024 | 401 025 4200 | CARBON 1.8K JA 1/6W |
| R1025 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1026 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1027 | 401 024 9305 | CARBON 1.2K JA 1/6W |
| R1028 | 401 024 9305 | CARBON 1.2K JA 1/6W |
| R1029 | 401 024 9305 | CARBON 1.2K JA 1/6W |
| R1030 | 401 026 6609 | CARBON 390 JA 1/6W |
| R1031 | 401 024 7400 | CARBON 10K JA 1/6W |
| R1032 | 401 025 9502 | CARBON 240 JA 1/6W |
| R1033 | 401 025 3005 | CARBON 1.6K JA 1/6W |
| R1034 | 401 025 4200 | CARBON 1.8K JA 1/6W |
| R1035 | 401 026 9600 | CARBON 470 JA 1/6W |
| R1036 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R1037 | 401 025 1308 | CARBON 150 JA 1/6W |
| R1038 | 401 025 3807 | CARBON 180 JA 1/6W |
| R1039 | 401 024 7400 | CARBON 10K JA 1/6W |
| R1040 | 401 027 2303 | CARBON 560 JA 1/6W |
| R1041 | 401 026 1000 | CARBON 2.7K JA 1/6W |
| R1042 | 401 025 1605 | CARBON 1.5K JA 1/6W |
| R1043 | 401 025 4200 | CARBON 1.8K JA 1/6W |
| R1044 | 401 025 1605 | CARBON 1.5K JA 1/6W |
| R1045 | 401 026 0607 | CARBON 270 JA 1/6W |
| R1046 | 401 025 0608 | CARBON 1.3K JA 1/6W |
| R1047 | 401 026 6609 | CARBON 390 JA 1/6W |
| R1048 | 401 027 8305 | CARBON 820 JA 1/6W |
| R1049 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R1050 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1051 | 401 026 4308 | CARBON 3.3K JA 1/6W |
| R1052 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1053 | 401 026 1000 | CARBON 2.7K JA 1/6W |
| R1054 | 401 025 0806 | CARBON 13K JA 1/6W |
| R1055 | 401 027 7209 | CARBON 7.5K JA 1/6W |
| R1056 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1057 | 401 027 5502 | CARBON 6.8K JA 1/6W |
| R1058 | 401 025 1902 | CARBON 15K JA 1/6W |
| R1059 | 401 025 1902 | CARBON 15K JA 1/6W |
| R1060 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R1061 | 401 027 0507 | CARBON 470K JA 1/6W |
| R1062 | 401 026 7606 | CARBON 390K JA 1/6W |
| R1063 | 401 027 8602 | CARBON 8.2K JA 1/6W |
| R1064 | 401 026 7408 | CARBON 39K JA 1/6W |
| R1065 | 401 025 0004 | CARBON 120K JA 1/6W |
| R1066 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R1067 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1068 | 401 024 6700 | CARBON 100 JA 1/6W |
| R1069 | 401 025 0806 | CARBON 13K JA 1/6W |
| R1070 | 401 028 0001 | CARBON 910 JA 1/6W |
| R1080 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1081 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1082 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1083 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R1084 | 401 027 5205 | CARBON 680 JA 1/6W |
| R1085 | 401 026 6609 | CARBON 390 JA 1/6W |
| R1087 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R1088 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R1089 | 401 026 1307 | CARBON 27K JA 1/6W |
| R1090 | 401 025 0608 | CARBON 1.3K JA 1/6W |
| R1101 | 401 026 3905 | CARBON 330 JA 1/6W |
| R1102 | 401 025 6105 | CARBON 200 JA 1/6W |
| R1103 | 401 026 6609 | CARBON 390 JA 1/6W |
| R1105 | 401 025 4200 | CARBON 1.8K JA 1/6W |
| R1106 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1107 | 401 026 9907 | CARBON 4.7K JA 1/6W |

| Location | Part No. | Description |
|---|---|---|
| R1108 | 401 024 7400 | CARBON 10K JA 1/6W |
| R1109 | 401 025 8208 | CARBON 22K JA 1/6W |
| R1112 | 401 026 9600 | CARBON 470 JA 1/6W |
| R1114 | 401 027 5205 | CARBON 680 JA 1/6W |
| R1115 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R1116 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R1117 | 401 026 5800 | CARBON 3.6K JA 1/6W |
| R1118 | 401 026 9600 | CARBON 470 JA 1/6W |
| R1119 | 401 026 6609 | CARBON 390 JA 1/6W |
| R1120 | 401 027 8602 | CARBON 8.2K JA 1/6W |
| R1121 | 401 024 8001 | CARBON 1M JA 1/6W |
| R1122 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1123 | 401 024 7707 | CARBON 100K JA 1/6W |
| R1124 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1126 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1127 | 401 026 9600 | CARBON 470 JA 1/6W |
| R1128 | 401 026 9600 | CARBON 470 JA 1/6W |
| R1129 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1130 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1131 | 401 025 1605 | CARBON 1.5K JA 1/6W |
| R1132 | 401 024 7400 | CARBON 10K JA 1/6W |
| R1133 | 401 026 8504 | CARBON 430 JA 1/6W |
| R1134 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1301 | 401 022 0809 | CARBON 68 JA 1/4W |
| R1302 | 401 027 2303 | CARBON 560 JA 1/6W |
| R1303 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1304 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1305 | 401 028 0001 | CARBON 910 JA 1/6W |
| R1306 | 401 026 5800 | CARBON 3.6K JA 1/6W |
| R1307 | 401 025 1605 | CARBON 1.5K JA 1/6W |
| R1308 | 401 027 6905 | CARBON 750 JA 1/6W |
| R1309 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R1310 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R1313 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1314 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R1315 | 401 025 8208 | CARBON 22K JA 1/6W |
| R1316 | 401 025 8208 | CARBON 22K JA 1/6W |
| R1318 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R1319 | 401 027 0309 | CARBON 47K JA 1/6W |
| R1320 | 401 027 0309 | CARBON 47K JA 1/6W |
| R1321 | 401 024 9008 | CARBON 120 JA 1/6W |
| R1323 | 401 025 8208 | CARBON 22K JA 1/6W |
| R1324 | 401 021 0701 | CARBON 56 JA 1/4W |
| R1325 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R1335 | 401 026 1000 | CARBON 2.7K JA 1/6W |
| R1336 | 401 026 1000 | CARBON 2.7K JA 1/6W |
| R1338 | 401 026 1000 | CARBON 2.7K JA 1/6W |
| R1343 | 401 024 7400 | CARBON 10K JA 1/6W |
| R1344 | 401 026 4605 | CARBON 33K JA 1/6W |
| R1345 | 401 026 0607 | CARBON 270 JA 1/6W |
| R1346 | 401 019 9600 | CARBON 47 JA 1/4W |
| R1347 | 401 027 6608 | CARBON 75 JA 1/6W |
| R1348 | 401 027 6608 | CARBON 75 JA 1/6W |
| | | **(SEMI VARIABLE RESISTORS)** |
| SVR1001 | 4-222V-69104 | 2K OHM |
| or | 4-222V-69004 | 2K OHM |
| or | 4-222V-68908 | 2.2K OHM |
| SVR1002 | 4-222V-69110 | 50K OHM |
| or | 4-222V-69010 | 50K OHM |
| or | 4-222V-68916 | 47K OHM |
| SVR1004 | 4-222V-69107 | 10K OHM |
| or | 4-222V-69007 | 10K OHM |
| or | 4-222V-68912 | 10K OHM |
| SVR1005 | 4-222V-69107 | 10K OHM |
| or | 4-222V-69007 | 10K OHM |
| or | 4-222V-68912 | 10K OHM |
| SVR1006 | 4-222V-69110 | 50K OHM |
| or | 4-222V-69010 | 50K OHM |
| or | 4-222V-68916 | 47K OHM |
| SVR1007 | 4-222V-69110 | 50K OHM |
| or | 4-222V-69010 | 50K OHM |
| or | 4-222V-68916 | 47K OHM |
| SVR1008 | 4-222V-69110 | 50K OHM |

| Location | Part No. | Description |
|---|---|---|
| or | 4-222V-69010 | 50K OHM |
| or | 4-222V-68916 | 47K OHM |
| SVR1009 | 4-222V-69110 | 50K OHM |
| or | 4-222V-69010 | 50K OHM |
| or | 4-222V-68916 | 47K OHM |
| SVR1010 | 4-222V-69103 | 1K OHM |
| or | 4-222V-69003 | 1K OHM |
| or | 4-222V-68906 | 1K OHM |
| SVR1011 | 4-222V-69101 | 300 OHM |
| or | 4-222V-69001 | 300 OHM |
| or | 4-222V-68903 | 330 OHM |
| | | **(SWITCH)** |
| S1001 | 4-231V-20600 | SLIDE SWITCH |
| | | **(MISCELLANEOUS)** |
| CN1010 | 4-235V-45200 | CONNECTOR, 21-PIN |
| DL1001 | 4-284V-18350 | DELAY LINE |
| or | 4-284V-18300 | DELAY LINE |
| DL1101 | 4-284V-19400 | DELAY LINE |
| DL1301 | 4-228V-16100 | LC PACK |
| or | 4-228V-19700 | LC PACK |
| F1001 | 4-228V-19400 | LC PACK |
| F1002 | 4-953V-22000 | FILTER |
| F1101 | 4-228V-19300 | LC PACK |
| F1102 | 4-953V-23000 | FILTER |
| X1101 | 4-225V-23400 | CRYSTAL |

## VD-1 BOARD (AUDIO)
## NO.143-0-233V-08349

| Location | Part No. | Description |
|---|---|---|
| | | **(CAPACITORS)** |
| C2001 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2003 | CE+25475MRHAL | ELECT 4.7MF 25V M R HA |
| C2004 | CB+25183KRXRL | BC CON 0.018MF 25V K R XR |
| C2005 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2007 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2008 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C2009 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C2011 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2013 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C2014 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C2015 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C2016 | CC+50821KAYBG | CERAMIC 820PF 50V K A YB |
| C2017 | CE+50334MRHAL | ELECT 0.33MF 50V M R HA |
| C2018 | CB+25183KRXRL | BC CON 0.018MF 25V K R XR |
| C2019 | CB+16392KAXRG | BC CON 0.0039MF 16V K AXR |
| C2020 | CB+16332KAXRG | BC CON 0.0033MF 16V K AXR |
| C2021 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C2022 | CC+50221KAYBG | CERAMIC 220PF 50V K A YB |
| C2023 | CN100273JM++S | POLYPRO 0.027MF 100V J |
| C2024 | CE+16107MRHAL | ELECT 100MF 16V M R HA |
| C2025 | CB+25273KRXRL | BC CON 0.027MF 25V K R XR |
| C2026 | CB+16332KAXRG | BC CON 0.0033MF 16V K AXR |
| C2027 | CB+16472KAXRG | BC CON 0.0047MF 16V K AXR |
| C2028 | CB+16332KAXRG | BC CON 0.0033MF 16V K AXR |
| C2051 | CB+25104KDXRS | BC CON 0.1MF 25V K D XR |
| C2052 | CB+25104KRXRL | BC CON 0.1MF 25V K R XR |
| C2053 | CC+50102KAYBG | CERAMIC 0.001MF 50V K AYB |
| C2054 | CB+16152KAXRG | BC CON 0.0015MF 16V K AXR |
| C2055 | CB+25473KRXRL | BC CON 0.047MF 25V K R XR |
| C2056 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C2057 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C2058 | CC+50101KAYBG | CERAMIC 100PF 50V K A YB |
| C2059 | CC+50101KAYBG | CERAMIC 100PF 50V K A YB |
| C2060 | CB+25103MAXRS | BC CON 0.01MF 25V M A XR |
| C2061 | CC+50151KAYBG | CERAMIC 150PF 50V K A YB |

| Location | Part No. | Description |
|---|---|---|
| | | **(DIODES)** |
| D2001 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| | | **(INTEGRATED CIRCUIT)** |
| IC2001 | SILA7090+++++ | IC LA7090 |
| | | **(COILS)** |
| L2001 | 4-253V-76249 | HF CHOKE 10MH |
| L2002 | 4-253V-95801 | HF CHOKE 27MH |
| L2003 | 4-253V-76233 | HF CHOKE 560UH |
| L2051 | 4-253V-97628 | HF CHOKE 560UH |
| L2052 | 4-471V-11500 | CORE |
| L2053 | 4-471V-11500 | CORE |
| | | **(TRANSISTORS)** |
| Q2001 | STD1011S++++T | TR 2SD1011 S |
| or | STD1011R++++T | TR 2SD1011 R |
| or | STD1011T++++T | TR 2SD1011 T |
| or | STC3495+++++T | TR 2SC3495 |
| Q2002 | STD1011S++++T | TR 2SD1011 S |
| or | STD1011R++++T | TR 2SD1011 R |
| or | STD1011T++++T | TR 2SD1011 T |
| or | STC3495+++++T | TR 2SC3495 |
| Q2003 | STA1016G++++T | TR 2SA1016 G |
| or | STA1016F++++T | TR 2SA1016 F |
| Q2004 | STC945+Q+++AT | TR 2SC945A Q |
| or | STC945+P+++AT | TR 2SC945A P |
| Q2005 | STC536+G++++T | TR 2SC536 G |
| or | STC536+F++++T | TR 2SC536 F |
| Q2006 | STC536+G++++T | TR 2SC536 G |
| or | STC536+F++++T | TR 2SC536 F |
| | | **(RESISTORS)** |
| R2001 | 401 025 4606 | CARBON 18K JA 1/6W |
| R2002 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R2003 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R2005 | 401 026 1000 | CARBON 2.7K JA 1/6W |
| R2006 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R2007 | 401 027 8602 | CARBON 8.2K JA 1/6W |
| R2008 | 401 025 9007 | CARBON 2.2M JA 1/6W |
| R2012 | 401 024 6700 | CARBON 100 JA 1/6W |
| R2013 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R2014 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R2015 | 401 024 7400 | CARBON 10K JA 1/6W |
| R2016 | 401 024 7400 | CARBON 10K JA 1/6W |
| R2017 | 401 026 4308 | CARBON 3.3K JA 1/6W |
| R2018 | 401 026 2908 | CARBON 3K JA 1/6W |
| R2020 | 401 027 7209 | CARBON 7.5K JA 1/6W |
| R2021 | 401 024 7400 | CARBON 10K JA 1/6W |
| R2022 | 401 027 5502 | CARBON 6.8K JA 1/6W |
| R2023 | 401 025 1308 | CARBON 150 JA 1/6W |
| R2024 | 401 025 4903 | CARBON 180K JA 1/6W |
| R2025 | 401 027 4307 | CARBON 6.2K JA 1/6W |
| R2026 | 401 026 1000 | CARBON 2.7K JA 1/6W |
| R2027 | 401 027 5205 | CARBON 680 JA 1/6W |
| R2028 | 401 024 9701 | CARBON 12K JA 1/6W |
| R2029 | 401 027 2303 | CARBON 560 JA 1/6W |
| R2031 | 402 004 0008 | FUSIBLE RES 10 JA 1/4W |
| R2032 | 401 026 4605 | CARBON 33K JA 1/6W |
| R2033 | 401 026 4605 | CARBON 33K JA 1/6W |
| R2049 | 401 025 1902 | CARBON 15K JA 1/6W |
| | | **(SEMI VARIABLE RESISTORS)** |
| SVR2001 | 4-222V-68918 | 100K OHM |
| or | 4-222V-69011 | 100K OHM |
| or | 4-222V-69111 | 100K OHM |
| SVR2002 | 4-222V-68912 | 10K OHM |
| or | 4-222V-69007 | 10K OHM |
| or | 4-222V-69107 | 10K OHM |
| | | **(TRANSFORMER)** |
| T2001 | 4-258V-18600 | OSC COIL |

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| Location | Part No. | Description |
|---|---|---|
| | | **(MISCELLANEOUS)** |
| F2051 | 4–953V–26111 | FILTER |
| F2052 | 4–953V–26113 | FILTER |

## VD-1 BOARD (SERVO)
## NO.143-0-233V-08349

| Location | Part No. | Description |
|---|---|---|
| | | **(COMPOSITE)** |
| B4002 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4003 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4004 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4005 | 4–202V–14900 | DIODE DA203 |
| B4201 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4202 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4203 | SRA1345+++++T | TR MD 2SA1345 |
| B4204 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4205 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
| B4206 | SRA1345+++++T | TR MD 2SA1345 |
| | | **(CAPACITORS)** |
| C4001 | CC+50221KAYBG | CERAMIC 220PF 50V K A YB |
| C4002 | CE+25106MVLRS | ELECT 10MF 25V M V LR |
| or | CT+16106KKD+S | TANTALUM 10MF 16V K |
| C4003 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4004 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4005 | CE+25106MVLRS | ELECT 10MF 25V M V LR |
| or | CT+16106KKD+S | TANTALUM 10MF 16V K |
| C4006 | CC+50560JASLG | CERAMIC 56PF 50V J A SL G |
| C4007 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4008 | CB+16682KAXRG | BC CON 0.0068MF 16V K AXR |
| C4009 | CB+16682KAXRG | BC CON 0.0068MF 16V K AXR |
| C4012 | CB+25473MRXRL | BC CON 0.047MF 25V M R XR |
| C4013 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C4014 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4015 | CM+50103KC++L | MYLAR 0.01MF 50V K C |
| C4016 | CA+25224KV++S | ALUMINUM 0.22MF 25V K |
| or | CF+50224JM++S | THIN FILM 0.22MF 50V J |
| or | CF+63224JM++S | THIN FILM 0.22MF 63V J |
| C4017 | CF+50394JM++S | THIN FILM 0.39MF 50V J |
| or | CF+63394JM++S | THIN FILM 0.39MF 63V J |
| C4018 | CM+50223KC++L | MYLAR 0.022MF 50V K C |
| C4019 | CM+50223KC++L | MYLAR 0.022MF 50V K C |
| C4020 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4021 | CE+16106MVHAS | ELECT 10MF 16V M V HA |
| C4022 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C4023 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4024 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4025 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4029 | CM+50333KC++S | MYLAR 0.033MF 50V K C |
| C4030 | CM+50104KG++S | MYLAR 0.1MF 50V K G |
| C4031 | CM+50393KC++L | MYLAR 0.039MF 50V K C |
| C4032 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4033 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C4034 | CC+50102KAYBG | CERAMIC 0.001MF 50V K AYB |
| C4035 | CE6R3336MVHAS | ELECT 33MF 6.3V M V HA |
| C4036 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C4037 | CE+16336MRHAL | ELECT 33MF 16V M R HA |
| C4038 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4039 | CM+50154KC++L | MYLAR 0.15MF 50V K C |
| C4040 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4041 | CE+50105MVHAS | ELECT 1MF 50V M V HA |
| C4042 | CC+50102KAYBG | CERAMIC 0.001MF 50V K AYB |
| C4043 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4044 | CC+50102KAYBG | CERAMIC 0.001MF 50V K AYB |
| C4045 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
| C4201 | CM+50332KC++L | MYLAR 0.0033MF 50V K C |
| C4202 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4203 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C4204 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C4205 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C4206 | CM+50103KC++L | MYLAR 0.01MF 50V K C |
| C4207 | CM+50153KC++L | MYLAR 0.015MF 50V K C |
| C4208 | CM+50104KC++L | MYLAR 0.1MF 50V K C |
| C4209 | CM+50473KC++L | MYLAR 0.047MF 50V K C |
| C4211 | CM+50332KC++L | MYLAR 0.0033MF 50V K C |
| C4212 | CM+50332KC++L | MYLAR 0.0033MF 50V K C |
| C4214 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| | | **(DIODES)** |
| D4001 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4002 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4003 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4005 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4006 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4008 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4009 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| D4201 | SDDS442+++++T | DIODE DS442 |
| D4203 | SD1SS133++++T | DIODE 1SS133 |
| or | SDGMA01+++++T | DIODE GMA01 |
| | | **(INTEGRATED CIRCUITS)** |
| IC4001 | SILC74118011+ | IC LC7411-8011 |
| IC4002 | SILA7113+++++ | IC LA7113 |
| IC4003 | SITC4013BP+++ | IC TC4013BP |
| or | SILC4013B++++ | IC LC4013B |
| IC4201 | SIBA855A+++++ | IC BA855A |
| | | **(TRANSISTORS)** |
| Q4001 | STC945+P+++AT | TR 2SC945A P |
| or | STC2603F++++T | TR 2SC2603 F |
| Q4002 | STC945+P+++A+ | TR 2SC945A P |
| or | STC2603F+++++ | TR 2SC2603 F |
| Q4201 | STA933+Q++++T | TR 2SA933 Q |
| or | STA933+R++++T | TR 2SA933 R |
| | | **(RESISTORS)** |
| R4001 | 401 012 8105 | CARBON 100K JA 1/4W |
| R4002 | 401 012 7009 | CARBON 10K JA 1/4W |
| R4003 | 401 012 7009 | CARBON 10K JA 1/4W |
| R4004 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4005 | 401 012 7009 | CARBON 10K JA 1/4W |
| R4006 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4007 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4008 | 401 026 4605 | CARBON 33K JA 1/6W |
| R4009 | 401 024 7707 | CARBON 100K JA 1/6W |
| R4010 | 401 024 7707 | CARBON 100K JA 1/6W |
| R4011 | 401 027 0507 | CARBON 470K JA 1/6W |
| R4012 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4013 | 401 027 3003 | CARBON 56K JA 1/6W |
| R4014 | 401 026 4902 | CARBON 330K JA 1/6W |
| R4016 | 401 027 3003 | CARBON 56K JA 1/6W |
| R4017 | 401 027 3003 | CARBON 56K JA 1/6W |
| R4018 | 401 027 6103 | CARBON 680K JA 1/6W |
| R4019 | 401 026 7408 | CARBON 39K JA 1/6W |
| R4020 | 401 025 8703 | CARBON 220K JA 1/6W |
| R4021 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4022 | 401 024 6700 | CARBON 100 JA 1/6W |

| Location | Part No. | Description |
|---|---|---|
| R4023 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4024 | 401 012 5708 | CARBON 1K JA 1/4W |
| R4025 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4026 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4027 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4028 | 401 025 4606 | CARBON 18K JA 1/6W |
| R4029 | 401 026 4308 | CARBON 3.3K JA 1/6W |
| R4030 | 401 025 7409 | CARBON 220 JA 1/6W |
| R4031 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R4032 | 401 026 4605 | CARBON 33K JA 1/6W |
| R4033 | 401 026 4605 | CARBON 33K JA 1/6W |
| R4034 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R4035 | 401 027 5908 | CARBON 68K JA 1/6W |
| R4036 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4037 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4038 | 401 027 8107 | CARBON 82 JA 1/6W |
| R4039 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4040 | 401 027 5205 | CARBON 680 JA 1/6W |
| R4041 | 401 026 9600 | CARBON 470 JA 1/6W |
| R4042 | 401 026 4902 | CARBON 330K JA 1/6W |
| R4043 | 401 021 3009 | CARBON 5.6K JA 1/4W |
| R4044 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R4045 | 401 025 8703 | CARBON 220K JA 1/6W |
| R4046 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R4047 | 401 024 7707 | CARBON 100K JA 1/6W |
| R4048 | 401 025 4903 | CARBON 180K JA 1/6W |
| R4049 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4050 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4051 | 401 048 7004 | MT-FILM 4.7K FD 1/4W |
| R4052 | 401 048 7004 | MT-FILM 4.7K FD 1/4W |
| R4053 | 401 025 4903 | CARBON 180K JA 1/6W |
| R4054 | 401 027 0507 | CARBON 470K JA 1/6W |
| R4055 | 401 016 3809 | CARBON 2.2K JA 1/4W |
| R4056 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R4058 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R4059 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4060 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4061 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4062 | 401 025 8703 | CARBON 220K JA 1/6W |
| R4063 | 401 024 7707 | CARBON 100K JA 1/6W |
| R4064 | 401 024 7707 | CARBON 100K JA 1/6W |
| R4065 | 401 025 1902 | CARBON 15K JA 1/6W |
| R4066 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4067 | 401 026 9600 | CARBON 470 JA 1/6W |
| R4071 | 401 012 5708 | CARBON 1K JA 1/4W |
| R4075 | 401 024 7707 | CARBON 100K JA 1/6W |
| R4076 | 401 024 7707 | CARBON 100K JA 1/6W |
| R4077 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4079 | 401 025 2305 | CARBON 150K JA 1/6W |
| R4201 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4202 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4203 | 401 027 3003 | CARBON 56K JA 1/6W |
| R4204 | 401 025 8208 | CARBON 22K JA 1/6W |
| R4205 | 401 025 8703 | CARBON 220K JA 1/6W |
| R4206 | 401 025 1902 | CARBON 15K JA 1/6W |
| R4207 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R4208 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4209 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4210 | 401 027 3003 | CARBON 56K JA 1/6W |
| R4211 | 401 024 7707 | CARBON 100K JA 1/6W |
| R4212 | 401 026 1307 | CARBON 27K JA 1/6W |
| R4213 | 401 025 2305 | CARBON 150K JA 1/6W |
| R4214 | 401 025 3500 | CARBON 160K JA 1/6W |
| R4215 | 401 025 2305 | CARBON 150K JA 1/6W |
| R4216 | 401 027 9005 | CARBON 82K JA 1/6W |
| R4217 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4218 | 401 027 9005 | CARBON 82K JA 1/6W |
| R4219 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4220 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4221 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4222 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4225 | 401 024 7004 | CARBON 1K JA 1/6W |
| R4226 | 401 027 0309 | CARBON 47K JA 1/6W |
| R4227 | 401 024 7707 | CARBON 100K JA 1/6W |
| R4228 | 401 024 7400 | CARBON 10K JA 1/6W |
| R4229 | 401 026 1604 | CARBON 270K JA 1/6W |
|  |  | **(SEMI VARIABLE RESISTORS)** |
| SVR4001 | 4–222V–69112 | 200K OHM |
| or | 4–222V–68920 | 220K OHM |
| or | 4–222V–69012 | 200K OHM |
| SVR4002 | 4–222V–69112 | 200K OHM |
| or | 4–222V–68920 | 220K OHM |
| or | 4–222V–69012 | 200K OHM |
| SVR4003 | 4–222V–69112 | 200K OHM |
| or | 4–222V–68920 | 220K OHM |
| or | 4–222V–69012 | 200K OHM |
|  |  | **(VARIABLE RESISTOR)** |
| VR4004 | 4–222V–29600 | 100K OHM |

## VD-2 BOARD (VIDEO)
## NO.143-0-233V-08400

| Location | Part No. | Description |
|---|---|---|
|  |  | **(COMPOSITE)** |
| B1201 | SRC3399+++++T | TR MD 2SC3399 |
| or | SRRN1204++++T | TR MD RN1204 |
|  |  | **(CAPACITORS)** |
| C1201 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1202 | CE+16106MRAKL | ELECT 10MF 16V M R AK |
| C1203 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1206 | CE+16106MRAKL | ELECT 10MF 16V M R AK |
| C1207 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1208 | CE6R3476MRHAL | ELECT 47MF 6.3V M R HA |
|  |  | **(DIODES)** |
| D1201 | SD1SS133++++T | DIODE 1SS133 |
| D1202 | SD1SS133++++T | DIODE 1SS133 |
|  |  | **(INTEGRATED CIRCUIT)** |
| IC1201 | SIBA7025L++++ | IC BA7025L |
|  |  | **(TRANSISTORS)** |
| Q1201 | STA608+F++++B | TR 2SA608 F |
| or | STA1309R++++T | TR 2SA1309 R |
| Q1202 | STC536+F++++B | TR 2SC536 F |
| or | STC2669Y++++T | TR 2SC2669 Y |
|  |  | **(RESISTORS)** |
| R1201 | 401 025 8208 | CARBON 22K JA 1/6W |
| R1202 | 401 025 8208 | CARBON 22K JA 1/6W |
| R1203 | 401 025 8208 | CARBON 22K JA 1/6W |
| R1204 | 401 024 7400 | CARBON 10K JA 1/6W |
| R1205 | 401 025 6105 | CARBON 200 JA 1/6W |
| R1206 | 401 025 2305 | CARBON 150K JA 1/6W |
| R1207 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R1208 | 401 025 8208 | CARBON 22K JA 1/6W |
| R1209 | 401 024 7400 | CARBON 10K JA 1/6W |
| R1210 | 401 026 1000 | CARBON 2.7K JA 1/6W |
| R1211 | 401 025 8208 | CARBON 22K JA 1/6W |
| R1212 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R1213 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| R1216 | 401 024 7400 | CARBON 10K JA 1/6W |
|  |  | **(TRANSISTOR)** |
| T1201 | 4–255V–11800 | CHOKE COIL |
|  |  | **(MISCELLANEOUS)** |
| CF1201 | 4–953V–07400 | FILTER |

## VD-5 BOARD (VIDEO)
NO.143-0-233V-21122

| Location | Part No. | Description |
|---|---|---|
| | | **(RESISTOR)** |
| R1451 | 401 025 7805 | CARBON 2.2K JA 1/6W |
| | | **(SWITCH)** |
| S1451 | 4–248V–00400 | SLIDE SWITCH |

## HIC BOARD (VIDEO)
NO.143-0-208V-02600

| Location | Part No. | Description |
|---|---|---|
| | | **(CAPACITORS)** |
| C1901 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1902 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1903 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1904 | CT+16105MZSVZ | CHIP TANTAL 1MF 16V M SV |
| C1905 | CC+25104ZZYFR | CHIP CERA 0.1MF 25V Z YF |
| C1906 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1907 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1908 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1910 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1911 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1912 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1913 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1914 | CT+25334MZSVZ | CHIP TANTAL 0.33MF 25V MS |
| C1916 | CC+25223KZYBR | CHIP CERA 0.022MF 25V K Y |
| C1917 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1918 | CC+25473ZZYFR | CHIP CERA 0.047MF 25V Z Y |
| C1919 | CC+50470JZSLR | CHIP CERA 47PF 50V J SL |
| C1920 | CC+50472KZYBR | CHIP CERA 0.0047MF 50V KY |
| C1921 | CC+50471JZSLR | CHIP CERA 470PF 50V J SL |
| C1922 | CC+25103KZYBR | CHIP CERA 0.01MF 25V K YB |
| C1923 | CC+50102KZYBR | CHIP CERA 0.001MF 50V K Y |
| | | **(DIODES)** |
| D1901 | SDDA204K++++Z | CHIP DIODE DA204K |
| D1902 | SDDA204K++++Z | CHIP DIODE DA204K |
| | | **(INTEGRATED CIRCUITS)** |
| IC1901 | SIAN6367S++++ | IC AN6367S |
| IC1902 | SIMN6163AS+++ | IC MN6163AS |
| | | **(TRANSISTORS)** |
| Q1901 | STC2412KR+++Z | CHIP TR 2SC2412K R |
| or | STC2412KS+++Z | CHIP TR 2SC2412K S |
| Q1902 | STC2412KR+++Z | CHIP TR 2SC2412K R |
| or | STC2412KS+++Z | CHIP TR 2SC2412K S |
| Q1903 | STC2412KR+++Z | CHIP TR 2SC2412K R |
| or | STC2412KS+++Z | CHIP TR 2SC2412K S |
| Q1904 | STA1037KR+++Z | CHIP TR 2SA1037 KR |
| or | STA1037KS+++Z | CHIP TR 2SA1037 KS |
| Q1905 | STC2412KR+++Z | CHIP TR 2SC2412K R |
| or | STC2412KS+++Z | CHIP TR 2SC2412K S |
| | | **(RESISTORS)** |
| R1901 | 401 039 0403 | MT-GLAZE 8.2K JA 1/10W |
| R1902 | 401 037 5400 | MT-GLAZE 1K JA 1/10W |
| R1903 | 401 037 9309 | MT-GLAZE 18K JA 1/10W |
| R1904 | 401 037 5400 | MT-GLAZE 1K JA 1/10W |
| R1906 | 401 037 5608 | MT-GLAZE 10K JA 1/10W |
| R1907 | 401 037 5400 | MT-GLAZE 1K JA 1/10W |
| R1908 | 401 038 4907 | MT-GLAZE 39 JA 1/10W |
| R1909 | 401 037 6605 | MT-GLAZE 120 JA 1/10W |
| R1910 | 401 038 3702 | MT-GLAZE 33K JA 1/10W |
| R1911 | 401 039 0403 | MT-GLAZE 8.2K JA 1/10W |
| R1912 | 401 037 5400 | MT-GLAZE 1K JA 1/10W |
| R1913 | 401 037 5400 | MT-GLAZE 1K JA 1/10W |
| R1914 | 401 038 9209 | MT-GLAZE 6.8K JA 1/10W |
| R1916 | 401 037 8005 | MT-GLAZE 15K JA 1/10W |
| R1919 | 401 037 6803 | MT-GLAZE 12K JA 1/10W |
| R1920 | 401 037 5707 | MT-GLAZE 100K JA 1/10W |
| R1921 | 401 037 5707 | MT-GLAZE 100K JA 1/10W |
| R1922 | 401 038 3702 | MT-GLAZE 33K JA 1/10W |
| R1923 | 401 038 0206 | MT-GLAZE 20K JA 1/10W |
| R1924 | 401 038 9209 | MT-GLAZE 6.8K JA 1/10W |
| R1925 | 401 038 2101 | MT-GLAZE 2.7K JA 1/10W |
| R1926 | 401 038 2200 | MT-GLAZE 27K JA 1/10W |
| R1927 | 401 038 0800 | MT-GLAZE 22K JA 1/10W |
| R1929 | 401 038 0800 | MT-GLAZE 22K JA 1/10W |
| R1930 | 401 037 5400 | MT-GLAZE 1K JA 1/10W |

## VP-1 BOARD (VIDEO PRE-AMP.)
NO.143-0-233V-12425

| Location | Part No. | Description |
|---|---|---|
| | | **(CAPACITORS)** |
| C1501 | CE+16106MRAKL | ELECT 10MF 16V M R AK |
| C1502 | CE+16106MRAKL | ELECT 10MF 16V M R AK |
| C1503 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1504 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1507 | CE+50105MRAKL | ELECT 1MF 50V M R AK |
| C1508 | CB+25473KRXRL | BC CON 0.047MF 25V K R XR |
| C1509 | CE+10476MRAKL | ELECT 47MF 10V M R AK |
| C1512 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1513 | CC+50681JAYBG | CERAMIC 680PF 50V J A YB |
| C1514 | CC+50180JASLG | CERAMIC 18PF 50V J A SL G |
| C1515 | CC+50220JASLG | CERAMIC 22PF 50V J A SL G |
| C1516 | CM+50104KG++S | MYLAR 0.1MF 50V K G |
| C1525 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1526 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1529 | CE+10476MRAKL | ELECT 47MF 10V M R AK |
| C1530 | CB+25473KRXRL | BC CON 0.047MF 25V K R XR |
| C1531 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C1534 | CM+50104KG++S | MYLAR 0.1MF 50V K G |
| | | **(INTEGRATED CIRCUIT)** |
| IC1501 | SIAN3313+++++ | IC AN3313 |
| | | **(COILS)** |
| L1503 | 4–253V–85825 | HF CHOKE 100UH |
| L1505 | 4–253V–85825 | HF CHOKE 100UH |
| L1506 | 4–253V–85816 | HF CHOKE 18UH |
| L1507 | 4–253V–85825 | HF CHOKE 100UH |
| | | **(TRANSISTORS)** |
| Q1502 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| or | STC2669O++++T | TR 2SC2669 O |
| or | STC2669Y++++T | TR 2SC2669 Y |
| Q1503 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| or | STC2669O++++T | TR 2SC2669 O |
| or | STC2669Y++++T | TR 2SC2669 Y |
| Q1504 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| Q1509 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| Q1510 | STC2839E++++T | TR 2SC2839 E |
| or | STC2839D++++T | TR 2SC2839 D |
| | | **(RESISTORS)** |
| R1503 | 401 027 8305 | CARBON 820 JA 1/6W |
| R1504 | 401 027 8305 | CARBON 820 JA 1/6W |
| R1509 | 401 024 9305 | CARBON 1.2K JA 1/6W |
| R1510 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1511 | 401 027 8305 | CARBON 820 JA 1/6W |
| R1512 | 401 027 5205 | CARBON 680 JA 1/6W |
| R1513 | 401 026 4308 | CARBON 3.3K JA 1/6W |
| R1514 | 401 025 1605 | CARBON 1.5K JA 1/6W |

| Location | Part No. | Description |
|---|---|---|
| R1515 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1533 | 401 012 3407 | CARBON 10 JA 1/4W |
| R1534 | 401 024 6403 | CARBON 10 JA 1/6W |
| R1535 | 401 027 5502 | CARBON 6.8K JA 1/6W |
| R1536 | 401 027 5502 | CARBON 6.8K JA 1/6W |
| R1537 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1538 | 401 024 7004 | CARBON 1K JA 1/6W |
| R1539 | 401 025 1605 | CARBON 1.5K JA 1/6W |
| | | **(MISCELLANEOUS)** |
| F1501 | 4–953V–26103 | FILTER |
| F1502 | 4–953V–26103 | FILTER |

## SY-1 BOARD (SYSTEM CONTROL)
## NO.143-0-233V-05904

| Location | Part No. | Description |
|---|---|---|
| | | **(COMPOSITE)** |
| B3011 | SRC3399++++++ | TR MD 2SC3399 |
| B3012 | SRC3399++++++ | TR MD 2SC3399 |
| B3013 | SRC3399++++++ | TR MD 2SC3399 |
| B3014 | SRC3399++++++ | TR MD 2SC3399 |
| B3015 | SRC3399++++++ | TR MD 2SC3399 |
| B3019 | SRA1345++++++ | TR MD 2SA1345 |
| | | **(CAPACITORS)** |
| C3001 | CC+50300JASLG | CERAMIC 30PF 50V J A SL G |
| C3002 | CC+50300JASLG | CERAMIC 30PF 50V J A SL G |
| C3003 | CE+50474MRHAL | ELECT 0.47MF 50V M R HA |
| C3004 | CB+25104MRF+L | BC CON 0.1MF 25V M R F |
| C3005 | CE+16106MRHAL | ELECT 10MF 16V M R HA |
| C3006 | CW+16106MRNPL | NON POLARIZED 10MF 16V M |
| C3007 | CC+50562KRYBL | CERAMIC 0.0056MF 50V K RY |
| C3008 | CE6R3336MRHAL | ELECT 33MF 6.3V M R HA |
| C3009 | CE6R3107MRHAL | ELECT 100MF 6.3V M R HA |
| C3010 | CB+25104MRF+L | BC CON 0.1MF 25V M R F |
| C3011 | CB+25104MRF+L | BC CON 0.1MF 25V M R F |
| C3012 | CE+50225MRHAL | ELECT 2.2MF 50V M R HA |
| C3013 | CF+50104JR++L | THIN FILM 0.1MF 50V J |
| C3014 | CW+50105MRNPL | NON POLARIZED 1MF 50V M |
| C3019 | CC+50221KAYBG | CERAMIC 220PF 50V K A YB |
| | | **(DIODES)** |
| D3001 | SDGZA047Z+++T | ZENER DIODE GZA4.7Z |
| or | SD05Z047Z+++T | ZENER DIODE 05Z4.7Z |
| D3002 | SDGZA056X+++T | ZENER DIODE GZA5.6X |
| or | SD05Z056X+++T | ZENER DIODE 05Z5.6X |
| D3003 | SDGZA036Z+++T | ZENER DIODE GZA3.6Z |
| or | SD05Z036Z+++T | ZENER DIODE 05Z3.6Z |
| D3005 | SDGZA033Y+++T | ZENER DIODE GZA3.3Y |
| or | SD05Z033Y+++T | ZENER DIODE 05Z3.3Y |
| D3011 | SD1SS133++++T | DIODE 1SS133 |
| D3012 | SD1SS133++++T | DIODE 1SS133 |
| | | **(INTEGRATED CIRCUITS)** |
| IC3001 | SID614042SE97 | IC HD614042SE97 |
| IC3002 | SIBA6238A++++ | IC BA6238A |
| IC3003 | SILA6324+++++ | IC LA6324 |
| or | SIUPC324C++++ | IC UPC324C |
| | | **(TRANSISTORS)** |
| Q3001 | STC536+E++++B | TR 2SC536 E |
| or | STC1740Q++++B | TR 2SC1740 Q SP |
| or | STC1740R++++B | TR 2SC1740 R SP |
| or | STC536+F++++B | TR 2SC536 F |
| Q3002 | STC536+E++++B | TR 2SC536 E |
| | | **(RESISTORS)** |
| R3001 | 401 012 9201 | CARBON 1M JA 1/4W |
| R3002 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3003 | 401 012 4404 | CARBON 100 JA 1/4W |
| R3004 | 401 014 6000 | CARBON 150K JA 1/4W |
| R3005 | 401 018 5702 | CARBON 330K JA 1/4W |
| R3008 | 401 012 9201 | CARBON 1M JA 1/4W |
| R3009 | 401 017 2702 | CARBON 27K JA 1/4W |
| R3010 | 401 019 3905 | CARBON 390K JA 1/4W |
| R3011 | 401 016 3700 | CARBON 2.2K JA 1/4W |
| R3012 | 401 014 5102 | CARBON 15K JA 1/4W |
| R3013 | 401 016 4707 | CARBON 22K JA 1/4W |
| R3014 | 401 016 5704 | CARBON 220K JA 1/4W |
| R3015 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3016 | 401 016 5704 | CARBON 220K JA 1/4W |
| R3017 | 401 016 5704 | CARBON 220K JA 1/4W |
| R3018 | 401 018 4804 | CARBON 33K JA 1/4W |
| R3019 | 401 018 4804 | CARBON 33K JA 1/4W |
| R3020 | 401 022 4005 | CARBON 68K JA 1/4W |
| R3021 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3022 | 401 022 3008 | CARBON 6.8K JA 1/4W |
| R3023 | 401 013 7206 | CARBON 120K JA 1/4W |
| R3024 | 401 017 2702 | CARBON 27K JA 1/4W |
| R3025 | 401 017 2702 | CARBON 27K JA 1/4W |
| R3026 | 401 014 4006 | CARBON 1.5K JA 1/4W |
| R3027 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3028 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3029 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3030 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3031 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3032 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3033 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3034 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3035 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3036 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3037 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3038 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3039 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3040 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3041 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3042 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3043 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3044 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3045 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3046 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3047 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3048 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3049 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3050 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3051 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3052 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3053 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3054 | 401 018 2701 | CARBON 330 JA 1/4W |
| R3055 | 401 018 2701 | CARBON 330 JA 1/4W |
| R3056 | 401 018 2701 | CARBON 330 JA 1/4W |
| R3057 | 401 018 2701 | CARBON 330 JA 1/4W |
| R3058 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3059 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3060 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3061 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3062 | 401 021 1807 | CARBON 560 JA 1/4W |
| R3063 | 401 021 1807 | CARBON 560 JA 1/4W |
| R3064 | 401 021 1807 | CARBON 560 JA 1/4W |
| R3065 | 401 018 2701 | CARBON 330 JA 1/4W |
| R3066 | 401 018 2701 | CARBON 330 JA 1/4W |
| R3067 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3068 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3069 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3070 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3071 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3072 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3073 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3074 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3075 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3076 | 401 012 6903 | CARBON 10K JA 1/4W |

| Location | Part No. | Description |
|---|---|---|
| R3077 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3079 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3080 | 401 014 5102 | CARBON 15K JA 1/4W |
| R3081 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3082 | 401 012 8006 | CARBON 100K JA 1/4W |
| R3084 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3086 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3087 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3100 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3101 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3102 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3103 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3104 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3105 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3106 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3107 | 401 012 6903 | CARBON 10K JA 1/4W |
| R3108 | 401 012 5609 | CARBON 1K JA 1/4W |
| R3151 | 401 061 0006 | OXIDE-MT 3.3 JA 1W |
| | | **(MISCELLANEOUS)** |
| X3001 | 4–266V–01100 | CERAMIC RESONATOR |

## SY-1 BOARD (POWER SUPPLY)
## NO.143-0-233V-05904

| Location | Part No. | Description |
|---|---|---|
| | 143–2–368T–10500 | HEAT SINK |
| | 143–2–383T–03100 | FUSE HOLDER |
| | | **(CAPACITORS)** |
| C5001 | CE+35338MVHAS | ELECT 3300MF 35V M V HA |
| C5002 | CE+16228MVHAS | ELECT 2200MF 16V M V HA |
| C5003 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C5004 | CE+16476MRHAL | ELECT 47MF 16V M R HA |
| C5005 | CE+10476MRHAL | ELECT 47MF 10V M R HA |
| C5006 | CE+16476MRHAL | ELECT 47MF 16V M R HA |
| C5007 | CE+50475MRHAL | ELECT 4.7MF 50V M R HA |
| C5009 | CE100107MY++S | ELECT 100MF 100V M Y |
| C5010 | CE100226MY++S | ELECT 22MF 100V M Y |
| C5011 | CE+25107MRHAL | ELECT 100MF 25V M R HA |
| C5012 | CE+35475MRHAL | ELECT 4.7MF 35V M R HA |
| C5013 | CE+35338MVHAS | ELECT 3300MF 35V M V HA |
| | | **(DIODES)** |
| D5001 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5002 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5003 | SDGZA220Y+++T | ZENER DIODE GZA22Y |
| D5004 | SDDS446+++++T | DIODE DS446 |
| D5005 | SDGZA091Z+++T | ZENER DIODE GZA9.1Z |
| D5006 | SDDS446+++++T | DIODE DS446 |
| D5007 | SDGZA300Z+++T | ZENER DIODE GZA30Z |
| D5008 | SDGZA043Y+++T | ZENER DIODE GZA4.3Y |
| D5010 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5011 | SDDS442+++++T | DIODE DS442 |
| | | **(INTEGRATED CIRCUIT)** |
| IC5001 | ⚠ SISTK5482++++ | IC STK5482 |
| | | **(TRANSISTORS)** |
| Q5001 | STC3070++++++ | TR 2SC3070 |
| Q5002 | STB985+S+++++ | TR 2SB985 S |
| or | STB985+T+++++ | TR 2SB985 T |
| Q5003 | STC536+E+++++ | TR 2SC536 E |
| or | STC536+F+++++ | TR 2SC536 F |
| Q5004 | STD415+Q+++++ | TR 2SD415 Q |
| or | STD600+F+++++ | TR 2SD600 F |
| Q5006 | STB631+F+++++ | TR 2SB631 F |
| or | STB549+Q+++++ | TR 2SB549 Q |
| | | **(RESISTORS)** |
| R5001 | 401 019 1901 | CARBON 3.9K JA 1/4W |
| R5002 | 401 021 8202 | CARBON 620 JA 1/4W |
| R5003 | 401 020 2003 | CARBON 4.7K JA 1/4W |
| R5004 | 401 021 8202 | CARBON 620 JA 1/4W |
| R5005 | 401 060 7303 | OXIDE-MT 270 JA 1W |
| or | 401 060 7402 | OXIDE-MT 270 JA 1W |
| R5006 | 401 020 2904 | CARBON 47K JA 1/4W |
| R5007 | 401 062 6007 | OXIDE-MT 560 JA 1W |
| or | 401 062 6106 | OXIDE-MT 560 JA 1W |
| R5008 | 401 023 2802 | CARBON 8.2K JA 1/4W |
| R5009 | 401 023 2802 | CARBON 8.2K JA 1/4W |
| R5010 | 401 067 0802 | OXIDE-MT 2.7K JA 2W |
| R5011 | 401 063 6303 | OXIDE-MT 820 JA 1W |
| or | 401 063 6402 | OXIDE-MT 820 JA 1W |
| R5012 | 401 011 2302 | CARBON 6.8K JA 1/2W |
| R5015 | 401 011 6102 | CARBON 8.2K JA 1/2W |
| R5016 | ⚠ 402 023 2106 | FUSIBLE RES 47 JA 1/4W |
| R5018 | 401 020 2904 | CARBON 47K JA 1/4W |
| R5022 | 401 014 2903 | CARBON 150 JA 1/4W |
| R5023 | 401 014 2903 | CARBON 150 JA 1/4W |
| | | **(MISCELLANEOUS)** |
| F5001 | ⚠ 4–234V–17612 | FUSE |

## SY-2 BOARD (SYSTEM CONTROL)
## NO.143-0-233V-17601

| Location | Part No. | Description |
|---|---|---|
| | 143–2–374T–14400 | BRACKET, POWER ON LED |
| | | **(COMPOSITE)** |
| B3201 | SRC144F++++++ | TR MD DTC144F |
| B3202 | SRA144F++++++ | TR MD DTA144F |
| | | **(DIODE)** |
| D3201 | SLSLP938B51RE | LED SLP938B-51 |
| | | **(RESISTORS)** |
| R3221 | 401 024 7004 | CARBON 1K JA 1/6W |
| or | 401 024 7004 | CARBON 1K JA 1/6W |
| | | **(SWITCHES)** |
| S3202 | 4–231V–72200 | PUSH SWITCH |
| or | 4–231V–73000 | PUSH SWITCH |
| S3203 | 4–231V–72200 | PUSH SWITCH |
| or | 4–231V–73000 | PUSH SWITCH |
| S3205 | 4–231V–29600 | SLIDE SWITCH |
| | | **(VARIABLE RESISTORS)** |
| VR3201 | 4–222V–32200 | PICTURE |
| VR3202 | 4–222V–28700 | TRACKING |

## PW-1 BOARD (POWER SUPPLY)
## NO.143-0-233V-20950

| Location | Part No. | Description |
|---|---|---|
| | 143–2–383T–03100 | FUSE HOLDER |
| | | **(CAPACITOR)** |
| C5101 | ⚠ 4–223V–28900 | 0.0047MF/250V |

| Location | Part No. | Description |
|---|---|---|
| | | **(DIODES)** |
| D5101 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5102 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5103 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5104 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5105 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5106 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5107 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| D5108 | SDDSF10C++++T | DIODE DSF10C |
| or | SDEM01Z+++++T | DIODE EM01Z |
| | | **(COIL)** |
| L5101 | 4-953V-26200 | FILTER |
| | | **(MISCELLANEOUS)** |
| F5101 | ⚠ 4-234V-17606 | FUSE |
| F5102 | ⚠ 4-234V-17612 | FUSE |

## TN-1 BOARD (TUNER I.F.)

## NO.143-0-233V-08023

| Location | Part No. | Description |
|---|---|---|
| | | **(COMPOSITE)** |
| B6001 | SRC3400+++++T | TR MD 2SC3400 |
| or | SRC124N++++++ | TR MD DTC124N |
| or | SRC124ES+++++ | TR MD DTC124ES |
| or | SRRN1203+++++ | TR MD RN1203 |
| | | **(CAPACITORS)** |
| C6001 | CC+50390JRRHL | CERAMIC 39PF 50V J R RH |
| C6002 | CC+50270JRRHL | CERAMIC 27PF 50V J R RH |
| C6003 | CC+50560JRRHL | CERAMIC 56PF 50V J R RH |
| C6004 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6005 | CB+16103NA+YG | BC CON 0.01MF 16V N A Y G |
| C6006 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6007 | CE+50474MRHAL | ELECT 0.47MF 50V M R HA |
| C6008 | CC+50180JRSLL | CERAMIC 18PF 50V J R SL |
| C6009 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6010 | CE+50225MRHAL | ELECT 2.2MF 50V M R HA |
| C6011 | CB+16103NA+YG | BC CON 0.01MF 16V N A Y G |
| C6012 | CE+16107MRHAL | ELECT 100MF 16V M R HA |
| C6013 | CC+50270JRRHL | CERAMIC 27PF 50V J R RH |
| C6014 | CE+50474MRHAL | ELECT 0.47MF 50V M R HA |
| C6015 | CC+50180JRCHL | CERAMIC 18PF 50V J R CH |
| C6016 | CC+50820JRLHL | CERAMIC 82PF 50V J R LH |
| C6018 | CC+50560JRRHL | CERAMIC 56PF 50V J R RH |
| C6020 | CC+50030CRCHL | CERAMIC 3PF 50V C R CH |
| C6021 | CC+50680JRRHL | CERAMIC 68PF 50V J R RH |
| C6022 | CC+50220JRRHL | CERAMIC 22PF 50V J R RH |
| C6024 | CC+50390JRSLL | CERAMIC 39PF 50V J R SL |
| C6025 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C6026 | CC+50102KRYBL | CERAMIC 0.001MF 50V K R Y |
| C6028 | CM+50223KR++L | MYLAR 0.022MF 50V K R |
| C6029 | CE+25475MRHAL | ELECT 4.7MF 25V M R HA |
| C6031 | CB+16103NA+YG | BC CON 0.01MF 16V N A Y G |
| C6032 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6033 | CE+16337MVHAS | ELECT 330MF 16V M V HA |
| C6034 | CE+25475MRHAL | ELECT 4.7MF 25V M R HA |
| C6035 | CF+50104JR++L | THIN FILM 0.1MF 50V J |
| C6036 | CE+50105MRHAL | ELECT 1MF 50V M R HA |
| C6037 | CE+25475MRHAL | ELECT 4.7MF 25V M R HA |
| C6041 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6042 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6045 | CF+50224JR++L | THIN FILM 0.22MF 50V J |
| C6053 | CC+50103ZRYFL | CERAMIC 0.01MF 50V Z R YF |
| C6055 | CC+50150JRRHL | CERAMIC 15PF 50V J R RH |
| C6060 | CF+50104JR++L | THIN FILM 0.1MF 50V J |
| | | **(DIODES)** |
| D6001 | SDGZA091Y++++ | ZENER DIODE GZA9.1Y |
| or | SD05Z091Y++++ | ZENER DIODE 05Z9.1Y |
| | | **(INTEGRATED CIRCUIT)** |
| IC6001 | SIM51365SP+++ | IC M51365SP |
| | | **(COILS)** |
| L6001 | 4-253V-74329 | HF CHOKE 56UH |
| or | 4-253V-77529 | HF CHOKE 56UH |
| L6002 | 4-253V-74320 | HF CHOKE 10UH |
| or | 4-253V-77520 | HF CHOKE 10UH |
| L6004 | 4-253V-74335 | HF CHOKE 180UH |
| or | 4-253V-77535 | HF CHOKE 180UH |
| L6007 | 4-253V-74300 | HF CHOKE 0.22UH |
| or | 4-253V-77500 | HF CHOKE 0.22UH |
| | | **(TRANSISTORS)** |
| Q6001 | STC2216++++++ | TR 2SC2216 |
| Q6003 | STA608+E++++T | TR 2SA608 E |
| or | STA608+F++++T | TR 2SA608 F |
| Q6060 | SF2K68++A+K++ | FET 2SK68 A K |
| or | SF2K68++A+L1+ | FET 2SK68 A L1 |
| or | SF2K68++++K++ | FET 2SK68 K |
| or | SF2K68++++L1+ | FET 2SK68 L1 |
| | | **(RESISTORS)** |
| R6001 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6002 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6003 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R6004 | 401 025 7102 | CARBON 22 JA 1/6W |
| R6005 | 401 025 7409 | CARBON 220 JA 1/6W |
| R6006 | 401 024 6700 | CARBON 100 JA 1/6W |
| R6007 | 401 027 9302 | CARBON 820K JA 1/6W |
| R6008 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R6010 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R6011 | 401 027 5502 | CARBON 6.8K JA 1/6W |
| R6012 | 401 027 3003 | CARBON 56K JA 1/6W |
| R6013 | 402 023 4506 | FUSIBLE RES 27 JA 1/2W |
| R6014 | 401 025 4200 | CARBON 1.8K JA 1/6W |
| R6015 | 401 026 3905 | CARBON 330 JA 1/6W |
| R6016 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R6017 | 401 027 0309 | CARBON 47K JA 1/6W |
| R6018 | 401 026 9303 | CARBON 47 JA 1/6W |
| R6019 | 401 027 8305 | CARBON 820 JA 1/6W |
| R6020 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6026 | 401 027 8602 | CARBON 8.2K JA 1/6W |
| R6027 | 401 026 3905 | CARBON 330 JA 1/6W |
| R6028 | 401 026 3905 | CARBON 330 JA 1/6W |
| R6029 | 401 027 2600 | CARBON 5.6K JA 1/6W |
| R6030 | 401 026 0607 | CARBON 270 JA 1/6W |
| R6031 | 401 026 3905 | CARBON 330 JA 1/6W |
| R6032 | 401 026 1604 | CARBON 270K JA 1/6W |
| R6033 | 401 026 1604 | CARBON 270K JA 1/6W |
| R6034 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6035 | 401 026 3905 | CARBON 330 JA 1/6W |
| R6036 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6037 | 401 026 9600 | CARBON 470 JA 1/6W |
| R6038 | 401 027 5007 | CARBON 68 JA 1/6W |
| R6039 | 401 027 5502 | CARBON 6.8K JA 1/6W |
| R6040 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R6041 | 401 024 8001 | CARBON 1M JA 1/6W |
| R6046 | 401 026 4308 | CARBON 3.3K JA 1/6W |
| R6051 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6052 | 401 026 1000 | CARBON 2.7K JA 1/6W |
| R6053 | 401 025 0608 | CARBON 1.3K JA 1/6W |
| R6054 | 401 025 7805 | CARBON 2.2K JA 1/6W |

X

| Location | Part No. | Description |
|---|---|---|
| R6055 | 401 025 1605 | CARBON 1.5K JA 1/6W |
| R6060 | 401 024 6700 | CARBON 100 JA 1/6W |
| R6061 | 401 026 1604 | CARBON 270K JA 1/6W |
| R6062 | 401 026 1604 | CARBON 270K JA 1/6W |
| R6063 | 401 024 8001 | CARBON 1M JA 1/6W |
| R6090 | 401 027 2600 | CARBON 5.6K JA 1/6W |
|  |  | **(SEMI VARIABLE RESISTORS)** |
| SVR6001 | 4–222V–68906 | 1K OHM |
| or | 4–222V–69106 | 5K OHM |
|  |  | **(TRANSFORMERS)** |
| T6002 | 4–256V–29700 | IFT |
| T6003 | 4–256V–29900 | IFT |
| T6004 | 4–256V–29800 | IFT |
| T6005 | 4–256V–30000 | IFT |
| T6006 | 4–256V–30000 | IFT |
|  |  | **(MISCELLANEOUS)** |
| X6001 | 4–953V–22300 | FILTER |
| X6002 | 4–953V–02601 | FILTER |
| X6003 | 4–953V–15500 | FILTER |
| X6004 | 4–953V–01701 | FILTER |
| X6005 | 4–953V–15700 | FILTER |

## TN-2 BOARD (TUNING CONTROL)
### NO.143-0-233V-17421

| Location | Part No. | Description |
|---|---|---|
|  |  | **(COMPOSITE)** |
| B6201 | 4–957V–10304 | R-PACK 10K OHMX4 |
| or | 4–956V–10304 | R-PACK 10K OHMX4 |
|  |  | **(CAPACITORS)** |
| C6201 | CC+50102KDYBS | CERAMIC 0.001MF 50V K D Y |
| C6202 | CE+50105MVAKS | ELECT 1MF 50V M V AK |
| C6203 | CE+16107MVHAS | ELECT 100MF 16V M V HA |
| C6204 | CE+50224MVAKS | ELECT 0.22MF 50V M V AK |
| C6205 | CE+50474MVAKS | ELECT 0.47MF 50V M V AK |
| C6206 | CC+50331KDYBS | CERAMIC 330PF 50V K D YB |
| C6207 | CC+50102KDYBS | CERAMIC 0.001MF 50V K D Y |
| C6208 | CC+50181KDYBS | CERAMIC 180PF 50V K D YB |
| C6209 | CM+50152JM++S | MYLAR 0.0015MF 50V J M |
| C6210 | CF+50104JM++S | THIN FILM 0.1MF 50V J |
| C6211 | CF+50334JM++S | THIN FILM 0.33MF 50V J |
| C6212 | CC+50220JASLG | CERAMIC 22PF 50V J A SL G |
| C6213 | CC+50220JASLG | CERAMIC 22PF 50V J A SL G |
| C6214 | CC+50050CDSLS | CERAMIC 5PF 50V C D SL |
| C6216 | CE+10336MVAKS | ELECT 33MF 10V M V AK |
| C6217 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6218 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6219 | CE+50106MVAKS | ELECT 10MF 50V M V AK |
| C6220 | CE+16107MVHAS | ELECT 100MF 16V M V HA |
| C6221 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6222 | CE+50226MVAKS | ELECT 22MF 50V M V AK |
| C6223 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6224 | CE+10336MVAKS | ELECT 33MF 10V M V AK |
| C6225 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6226 | CD5R5473ZV++S | EDL CON 0.047F 5.5V Z V |
| C6227 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6228 | CC+50103ZDYFS | CERAMIC 0.01MF 50V Z D YF |
| C6229 | CC+50101KAYBG | CERAMIC 100PF 50V K A YB |
| C6230 | CC+50101KAYBG | CERAMIC 100PF 50V K A YB |
| C6231 | CC+50101KAYBG | CERAMIC 100PF 50V K A YB |
| D6201 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6202 | SDGMA01+++++T | DIODE GMA01 |

| Location | Part No. | Description |
|---|---|---|
| or | SD1SS133++++T | DIODE 1SS133 |
| D6205 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6206 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6207 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
|  |  | **(DIODES)** |
|  |  | **(INTEGRATED CIRCUITS)** |
| IC6201 | SIM50754668SP | IC M50754-668SP |
| IC6202 | SIM58653P++++ | IC M58653P |
| IC6203 | SILA7212+++++ | IC LA7212 |
| IC6204 | SILA7910+++++ | IC LA7910 |
| IC6205 | SIMN1280L++++ | IC MN1280L |
| IC6206 | SIL5631++++++ | IC L5631 |
|  |  | **(TRANSISTORS)** |
| Q6203 | STC2021R+++++ | TR 2SC2021 R |
| or | STC2021Q+++++ | TR 2SC2021 Q |
| Q6204 | STC2021R+++++ | TR 2SC2021 R |
| or | STC2021Q+++++ | TR 2SC2021 Q |
| Q6205 | STB985+S+++++ | TR 2SB985 S |
| or | STB985+T+++++ | TR 2SB985 T |
| Q6207 | STC383TM+++++ | TR 2SC383TM |
|  |  | **(RESISTORS)** |
| R6201 | 401 024 6700 | CARBON 100 JA 1/6W |
| R6202 | 401 025 1902 | CARBON 15K JA 1/6W |
| R6203 | 401 025 1902 | CARBON 15K JA 1/6W |
| R6204 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6205 | 401 025 7409 | CARBON 220 JA 1/6W |
| R6206 | 401 025 8703 | CARBON 220K JA 1/6W |
| R6207 | 401 027 7407 | CARBON 75K JA 1/6W |
| R6208 | 401 025 1902 | CARBON 15K JA 1/6W |
| R6209 | 401 024 9305 | CARBON 1.2K JA 1/6W |
| R6210 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6211 | 401 025 4606 | CARBON 18K JA 1/6W |
| R6212 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6213 | 401 017 0807 | CARBON 270 JA 1/4W |
| R6214 | 401 017 0807 | CARBON 270 JA 1/4W |
| R6215 | 401 027 0309 | CARBON 47K JA 1/6W |
| R6219 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R6223 | 401 026 7002 | CARBON 3.9K JA 1/6W |
| R6224 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6225 | 401 026 4605 | CARBON 33K JA 1/6W |
| R6226 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6227 | 401 027 0309 | CARBON 47K JA 1/6W |
| R6228 | 401 025 8208 | CARBON 22K JA 1/6W |
| R6229 | 401 026 9907 | CARBON 4.7K JA 1/6W |
| R6230 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6231 | 401 024 6700 | CARBON 100 JA 1/6W |
| R6232 | 401 024 8001 | CARBON 1M JA 1/6W |
| R6233 | 401 012 9904 | CARBON 10M JA 1/4W |
| R6234 | 401 026 4902 | CARBON 330K JA 1/6W |
| R6235 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6236 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6237 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6238 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6239 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6240 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6241 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6242 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6243 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6244 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6245 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6246 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6247 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6248 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6249 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6250 | 401 024 7004 | CARBON 1K JA 1/6W |
| R6251 | 401 024 7400 | CARBON 10K JA 1/6W |

| Location | Part No. | Description |
|---|---|---|
| R6252 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6253 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6254 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6255 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6256 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6257 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6258 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6259 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6260 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6261 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6262 | 401 024 7400 | CARBON 10K JA 1/6W |
| R6263 | 401 027 0309 | CARBON 47K JA 1/6W |
| R6264 | 401 025 8208 | CARBON 22K JA 1/6W |
| | | **(SWITCHES)** |
| S6201 | 4–231V–82500 | SPECIAL SWITCH |
| S6202 | 4–231V–82500 | SPECIAL SWITCH |
| S6203 | 4–231V–82500 | SPECIAL SWITCH |
| S6204 | 4–231V–82500 | SPECIAL SWITCH |
| S6205 | 4–231V–82500 | SPECIAL SWITCH |
| S6206 | 4–231V–82500 | SPECIAL SWITCH |
| | | **(MISCELLANEOUS)** |
| CT6201 | 4–224V–12700 | TRIMMER |
| X6201 | 4–225V–23900 | CRYSTAL |
| or | 4–225V–24100 | CRYSTAL |
| X6202 | 4–225V–23100 | CRYSTAL |
| or | 4–225V–24200 | CRYSTAL |
| X6203 | 4–953V–07500 | FILTER |

## TN-3 BOARD (CHANNEL SELECT & TIMER)

## NO.143-0-233V-17521

| Location | Part No. | Description |
|---|---|---|
| | 143–2–374T–13401 | BRACKET, LEDS |
| | 143–2–386T–02400 | BRACKET, DIGITAL DISPLAY |
| | 143–2–210T–06000 | BRACKET, PHOTO SENSOR |
| | | **(CAPACITORS)** |
| C6301 | CE+50105MVAKS | ELECT 1MF 50V M V AK |
| C6302 | CE+50335MVAKS | ELECT 3.3MF 50V M V AK |
| C6303 | CC+50471JDSLS | CERAMIC 470PF 50V J D SL |
| C6304 | CE+16106MVAKS | ELECT 10MF 16V M V AK |
| | | **(DIODES)** |
| D6301 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6302 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6303 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6304 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6305 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6307 | SLSLP938B51RE | LED SLP938B-51 |
| D6308 | SLBG5628S++GR | LED BG5628S |
| D6309 | SLSLP938B51RE | LED SLP938B-51 |
| D6310 | SLBG5628S++GR | LED BG5628S |
| D6311 | SLBG5628S++GR | LED BG5628S |
| D6312 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6313 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6314 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6315 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6316 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6317 | SDGMA01+++++T | DIODE GMA01 |
| or | SD1SS133++++T | DIODE 1SS133 |
| D6318 | SPPN323BHT+++ | PHOTO SENSOR |
| | | **(INTEGRATED CIRCUIT)** |
| IC6301 | SICX20106A+++ | IC CX20106A |
| | | **(RESISTORS)** |
| R6301 | 401 024 6403 | CARBON 10 JA 1/6W |
| R6302 | 401 025 8604 | CARBON 220K GA 1/6W |
| R6303 | 401 025 8208 | CARBON 22K JA 1/6W |
| R6310 | 401 017 7608 | CARBON 3.9 JA 1/4W |
| | | **(SWITCHES)** |
| S6301 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6302 | 4–231V–82500 | SPECIAL SWITCH |
| S6303 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6304 | 4–231V–82500 | SPECIAL SWITCH |
| S6305 | 4–231V–82500 | SPECIAL SWITCH |
| S6306 | 4–231V–82500 | SPECIAL SWITCH |
| S6307 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6308 | 4–231V–82500 | SPECIAL SWITCH |
| S6309 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6310 | 4–231V–82500 | SPECIAL SWITCH |
| S6311 | 4–231V–82500 | SPECIAL SWITCH |
| S6312 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6313 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6314 | 4–231V–82500 | SPECIAL SWITCH |
| S6315 | 4–231V–82500 | SPECIAL SWITCH |
| S6316 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6317 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6318 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6319 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6320 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6321 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6322 | 4–231V–73000 | PUSH SWITCH |
| or | 4–231V–72200 | PUSH SWITCH |
| S6324 | 4–231V–82500 | SPECIAL SWITCH |
| S6325 | 4–231V–29700 | SLIDE SWITCH |
| | | **(MISCELLANEOUS)** |
| A6301 | 4–985V–04400 | DIGITAL DISPLAY |

## TM-2 BOARD (VPS)

## NO.149-0-233V-09700,09701

| Location | Part No. | Description |
|---|---|---|
| | 149–2–124T–00400 | CASE, TOP |
| | 149–2–125T–00900 | CASE, BOTTOM |
| | | **(CAPACITORS)** |
| C7201 | CC+50150JACHG | CERAMIC 15PF 50V J A CH G |
| C7202 | CC+50102KDYBS | CERAMIC 0.001MF 50V K D Y |
| C7203 | CC+50471KAYBG | CERAMIC 470PF 50V K A YB |
| C7204 | CM+50223KG++S | MYLAR 0.022MF 50V K G |
| C7205 | CC+50271KAYBG | CERAMIC 270PF 50V K A YB |

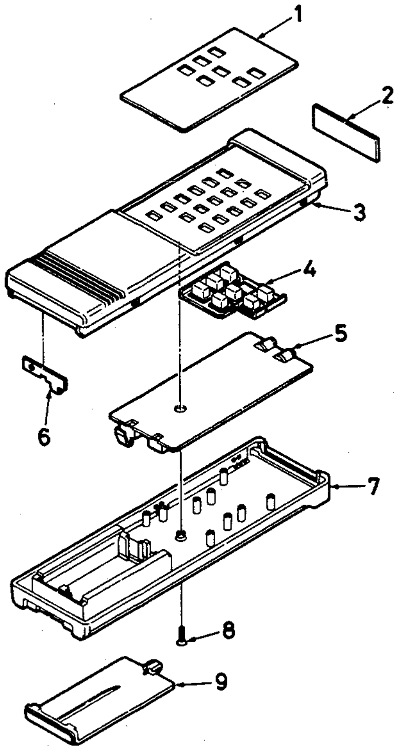
| Location | Part No. | Description |
|---|---|---|
| C7206 | CC+50101KAYBG | CERAMIC 100PF 50V K A YB |
| C7207 | CC+50101JDCHS | CERAMIC 100PF 50V J D CH |
| C7208 | CC+50150JACHG | CERAMIC 15PF 50V J A CH G |
| C7209 | CF+50683JM++S | THIN FILM 0.068MF 50V J |
| C7210 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C7211 | CF+50474JM++S | THIN FILM 0.47MF 50V J |
| C7212 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C7213 | CB+16103MA+YG | BC CON 0.01MF 16V M A Y G |
| C7214 | CE+16476MVAKS | ELECT 47MF 16V M V AK |
| C7215 | CE+16476MVAKS | ELECT 47MF 16V M V AK |
|  |  | **(INTEGRATED CIRCUITS)** |
| IC7201 | SISAA5235++++ | IC SAA5235 |
| IC7202 | SISDA5640++++ | IC SDA5640 (149-0-233V-09700) |
| or | SISAF1135P+++ | IC SAF1135P (149-0-233V-09701) |
|  |  | **(MISCELLANEOUS)** |
| L7201 | SISDA5640++++ | IC SDA5640 (149-0-233V-09700) |
| X7201 | 4–225V–24600 | CRYSTAL |

## TM-3 BOARD (VPS)
## NO.149-0-233V-09800

| Location | Part No. | Description |
|---|---|---|
|  | 149–2–377T–21000 | BRACKET, CIRCUI BOARD |

## REMOTE CONTROL UNIT
**NO.143-9-4100-64480**

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | 143–2–143T–74180 | PLATE, OPERATION |
| 2 | 143–2–132T–11080 | WINDOW |
| 3 | 143–2–111T–09580 | CASE, TOP |
| 4 | 143–2–161T–72780 | BUTTON, RUBBER |
| 5 | 143–0–233V–26580 | RM-1 BOARD ASSEMBLY |
| 6 | 143–2–382T–02900 | TERMINAL, BATTERY |
| 7 | 143–2–125T–09180 | CASE, BOTTOM |
| 8 | BJS2S2R6+8+ZK | S T FLAT H 2.6X8ZK |
| 9 | 143–2–128T–03480 | LID, BATTERY |



## RM-1 BOARD (REMOTE CONTROL UNIT)
**NO.143-0-233V-26580**

| Location | Part No. | Description |
|---|---|---|
|  | 143–2–382T–03000 | TERMINAL, POSITIVE |
|  | 143–2–382T–03100 | TERMINAL, NEGATIVE |
|  |  | **(CAPACITORS)** |
| C1 | CC+50101JDSLS | CERAMIC 100PF 50V J |
| C2 | CC+50101JDSLS | CERAMIC 100PF 50V J |
| C3 | CE6R3476MVHAS | ELECT 47MF 6.3V M |
|  |  | **(DIODES)** |
| D1 | SLSE303A+++NO | LED SE303A |
| or | SLSLR932A++NO | LED SLR932A |
| or | SLSLR938C++NO | LED SLR938C |
| D2 | SD1SS133+++++ | DIODE 1SS133 |
| or | SD1S2473+++++ | DIODE 1S2473 |
| D3 | SD1SS133+++++ | DIODE 1SS133 |
| or | SD1S2473+++++ | DIODE 1S2473 |
| D4 | SD1SS133+++++ | DIODE 1SS133 |
| or | SD1S2473+++++ | DIODE 1S2473 |
|  |  | **(INTEGRATED CIRCUIT)** |
| IC1 | SIUPD1913C+++ | IC UPD1913C |
|  |  | **(RESISTORS)** |
| R1 | 401 024 6037 | CARBON 1.5 JA 1/6W |
| R2 | 401 024 6740 | CARBON 100 JA 1/6W |
|  |  | **(MISCELLANEOUS)** |
| X1 | 4–266V–01600 | RESONATOR, 455K HZ |
| or | 4–266V–01700 | RESONATOR, 455K HZ |